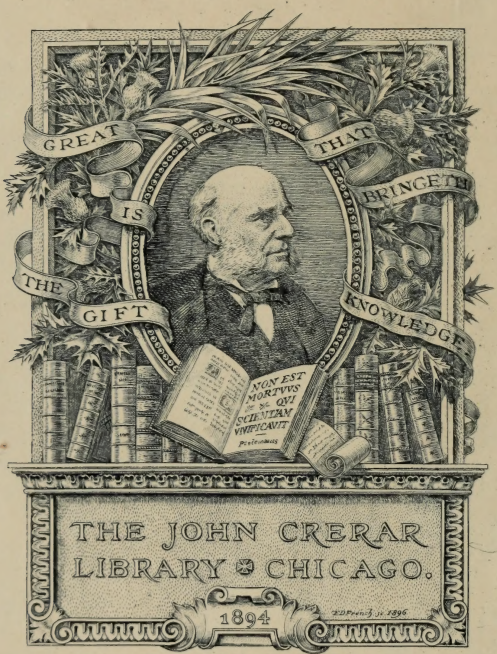

GREAT IS THE GIFT THAT BRINGETH KNOWLEDGE
NON EST MORTUUS QUI SCIENTIAM VIVIFICAVIT
THE JOHN CRERAR LIBRARY ✪ CHICAGO.
1894

PRESENTED BY

Northwestern University.

Digitized by the Internet Archive
in 2013

http://archive.org/details/catalogfor19121915univ

378.741
MH1

THE MAINE BULLETIN

VOL. XV OCTOBER, 1912 NO. 2

CATALOG

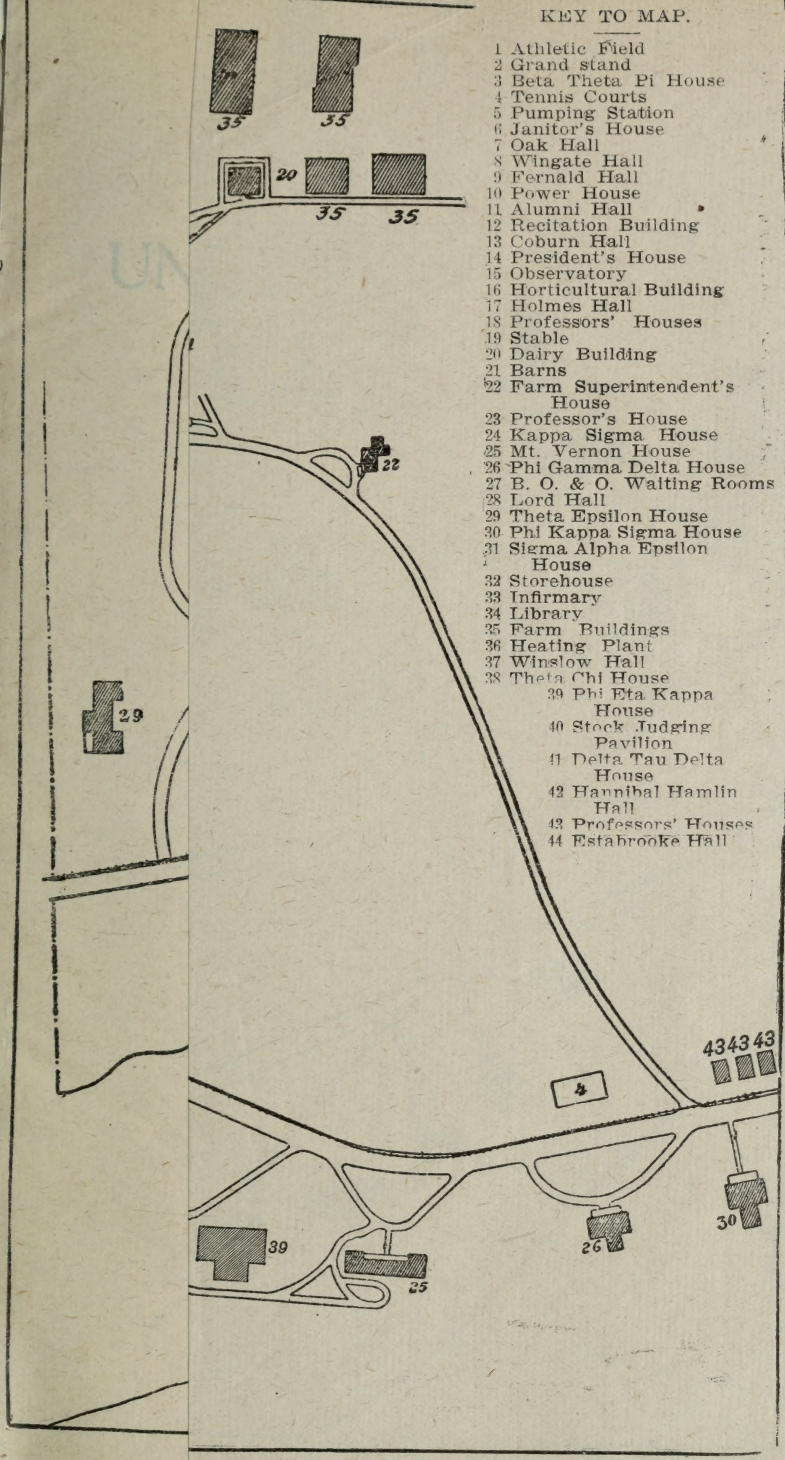
OF THE

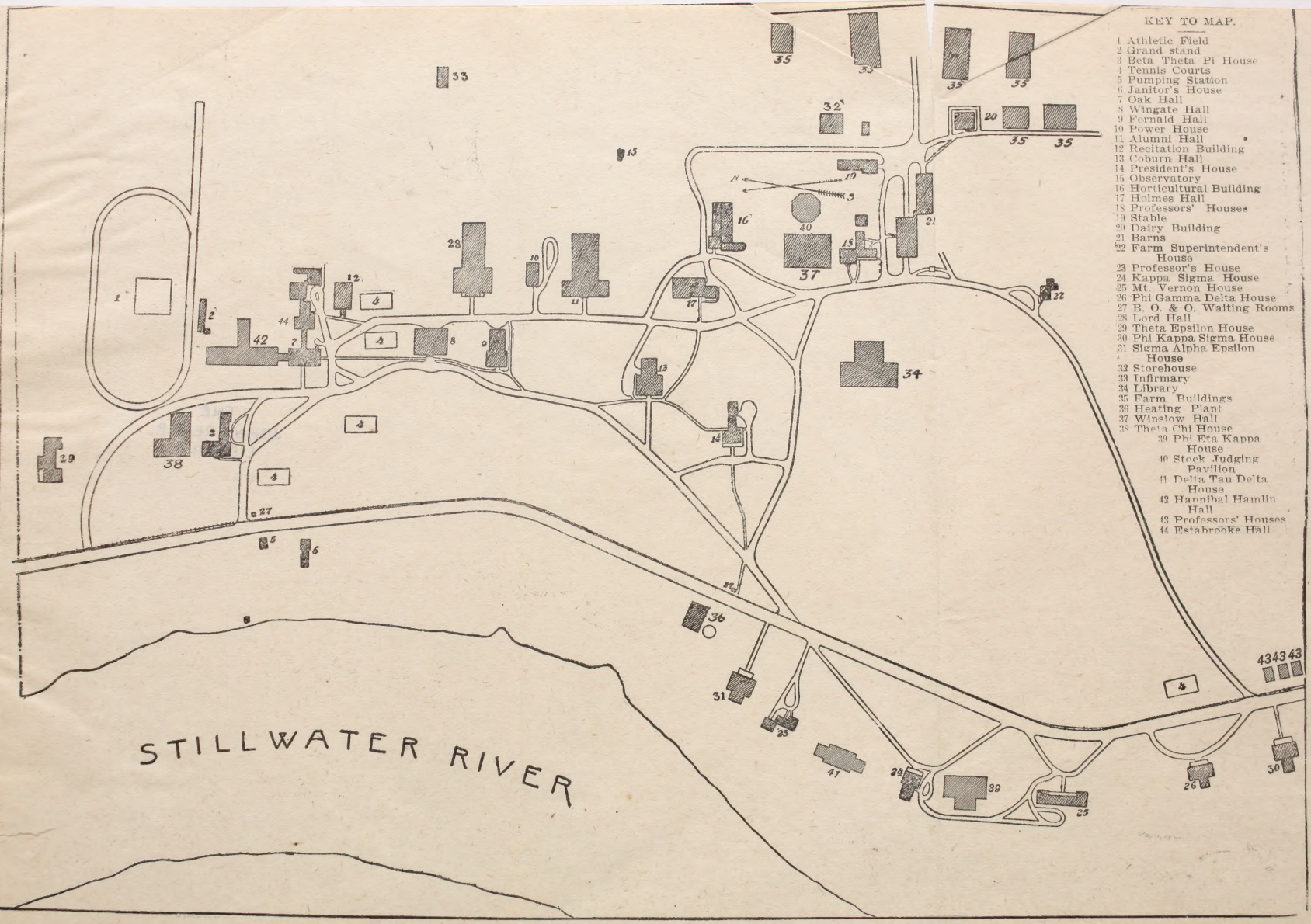
UNIVERSITY OF MAINE

1912-1913

Published monthly during the academic year by the University

Entered at the Orono post office as second class matter


KEY TO MAP.
1 Athletic Field
2 Grand stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' Houses
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 Estabrooke Hall
35
35
20
35
35
22
29
43 43 43
4
39
25
26
30


KEY TO MAP.
1 Athletic Field
2 Grand stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' Houses
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 Estabrooke Hall
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1912-1913

ORONO, MAINE

Printed for the University
SENTINEL PUBLISHING COMPANY
WATERVILLE, MAINE
1912

1912

JULY

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..
..	..	..	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

NOVEMBER

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..

1913

JANUARY

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

FEBRUARY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

MAY

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..

1913

JULY

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

NOVEMBER

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

1914

JANUARY

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
..	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..
..	..	..	..	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	..	..

MAY

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..

CALENDAR

FALL SEMESTER, 1912

September 13-17 inclusive,		Arrearage examinations
September 13-17 inclusive,		Entrance examinations
September 18,	Wednesday,	Registration begins, 1.30 P. M.
September 19,	Thursday,	First Chapel, 11.00 A. M.
October 12,	Saturday,	Columbus Day, a holiday
November 26,	Tuesday,	Meeting of the Board of Trustees
November 27,	Wednesday,	Thanksgiving recess begins, 12.00 M.
December 2,	Monday,	Thanksgiving recess ends, 1.30 P. M.
December 13,	Friday,	Sophomore prize declamations
December 21,	Saturday,	Christmas recess begins, 12.00 M.

1913

January 6,	Monday,	Christmas recess ends, 1.30 P. M.
January 31,	Friday,	Fall semester ends, 12.00 M.

SPRING SEMESTER, 1913

February 1,	Saturday,	Registration, 8.00 A. M.-12.00 M.
February 3,	Monday,	Spring semester begins, 8.00 A. M.
February 22,	Saturday,	Washington's Birthday, a holiday
March 29,	Saturday,	Spring recess begins, 12.00 M.
April 7,	Monday,	Spring recess ends, 1.30 P. M.
April 19,	Saturday,	Patriots' Day, a holiday
May 1,	Thursday,	An outline of theses must be passed in to the major instructor
May 30,	Friday,	Memorial Day, a holiday
June 2,	Monday,	Completed theses must be deposited at the Library, 12.00 M.
June 4-7,		Entrance examinations
June 4,	Wednesday,	8.00 A. M. Algebra
		10.00 A. M. Chemistry
		Botany
		1.30 P. M. Latin
		4.30 P. M. Roman History

878381
172373
Washington

June	5,	Thursday,	8.00 A. M. Solid Geometry
			10.00 A. M. French
			German
			1.30 P. M. English
			4.30 P. M. English History
June	6,	Friday,	8.00 A. M. American History and Civil Government
			Trigonometry
			10.00 A. M. Plane Geometry
			1.30 P. M. Physics
June	7,	Saturday,	8.00 A. M Greek
			Physiology
			10.00 A. M. Greek History
			1.30 P. M. Physiography
June	8,	Sunday,	Baccalaureate address
June	9,	Monday,	Class Day
			Reception by the President
June	10,	Tuesday,	Meeting of the Board of Trustees
			Commencement dinner
			Alumni luncheon; alumnæ luncheon
			Meeting of the Alumni Association
June	11,	Wednesday,	COMMENCEMENT

SUMMER TERM

June	25,	Wednesday,	Summer Term begins
August	5,	Tuesday,	Summer Term ends

FALL SEMESTER, 1913

September 12-16,			Arrearage examinations
September 12-16,			Entrance examinations
September 12,		Friday,	8.00 A. M. Algebra
			10.00 A. M. Chemistry
			Botany
			1.30 P. M. Latin
			4.30 P. M. Roman History
September, 13,		Saturday,	8.00 A. M. Solid Geometry
September 13,		Saturday,	10.00 A. M. French
			German
			1.30 P. M. English
			4.30 P. M. English History

September 15,	Monday,	8.00 A. M. American History and Civil Government Trigonometary 10.00 A. M. Plane Geometry 1.30 P. M. Physics
September 16,	Tuesday,	8.00 A. M. Greek Physiology 10.00 A. M. Greek History 1.30 P. M. Physiography
September 17,	Wednesday,	Registration begins, 8.00 A. M.
September 18,	Thursday,	First Chapel, 11.00 A. M.
October 12,	Sunday,	Columbus Day, a holiday
November 25,	Tuesday,	Meeting of the Board of Trustees
November 26,	Wednesday,	Thanksgiving recess begins, 12.00 M.
December 1.	Monday,	Thanksgiving recess ends, 1.30 P. M.
December 12,	Friday,	Sophomore prize declamations
December 20,	Saturday,	Christmas recess begins, 12.00 M.

1914

January 5,	Monday,	Christmas recess ends, 1.30 P. M.
January 30,	Friday,	Fall semester ends, 12.00 M.

SPRING SEMESTER, 1914

January 31,	Saturday,	Registration, 8 A. M.-12.00 M.
February 2,	Monday,	Spring semester begins, 8 A. M.
June 10,	Wednesday,	COMMENCEMENT

CALENDAR OF THE COLLEGE OF LAW

1912

October 2, Wednesday, Fall term begins
December 18, Wednesday, Fall term ends

1913

January 8, Wednesday, Winter term begins
March 19, Wednesday, Winter term ends
March 26, Wednesday, Spring term begins
June 11, Wednesday, COMMENCEMENT
October 8, Wednesday, Fall term begins
December 24, Wednesday, Fall term ends

1914

January 7, Wednesday, Winter term begins
March 18, Wednesday, Winter term ends
March 25, Wednesday, Spring term begins
June 10, Wednesday, COMMENCEMENT

BOARD OF TRUSTEES

Hon. WILLIAM THOMAS HAINES, B. S., LL. B., LL. D., President — Waterville
Term expires April 24, 1913

Hon. SAMUEL WADSWORTH GOULD, B. S., Clerk — Skowhegan
Term expires April 16, 1914

EDWIN JAMES HASKELL, B. S. — Westbrook
Term expires December 31, 1913

Hon. SUMNER PETER MILLS — Farmington
Term expires September 10, 1914

JOHN MARSHALL OAK, B. S. — Bangor
Term expires April 2, 1915

Hon. CHARLES LESTER JONES — Corinna
Term expires April 17, 1917

FREELAND JONES, LL. B. — Bangor
Term expires May 31, 1918

WILLIAM ROBINSON PATTANGALL, M. S. — Waterville
Term expires April 13, 1919.

EXECUTIVE COMMITTEE

Trustees HAINES, OAK, and F. JONES

MAINE AGRICULTURAL EXPERIMENT STATION COUNCIL

ROBERT JUDSON ALEY, Ph. D., LL. D. — *President*
CHARLES DAYTON WOODS, Sc. D. — *Secretary*
JOHN MARSHALL OAK, B. S., Bangor
FREELAND JONES LL. B., Bangor
CHARLES LESTER JONES, Corinna
JOHN PATRICK BUCKLEY, Stroudwater
— *Committee of Trustees*

Commissioner of Agriculture
EUGENE HARVEY LIBBY, Auburn — *State Grange*
ROBERT HALLOWELL GARDINER, Gardiner
State Pomological Society
RUTILLUS ALDEN, Winthrop — *State Dairymen's Association*
WILLIAM GEORGE HUNTON, Readfield
Maine Seed Improvement Association
WILLIAM HENRY DAVIS — *Maine Livestock Breeders' Association*

JAMES MONROE BARTLETT, M. S.
EDITH MARION PATCH, Ph. D.
WARNER JACKSON MORSE, Ph. D.
RAYMOND PEARL, Ph. D.
HERMAN HERBERT HANSON, M. S.
CHARLES EDWARD LEWIS, Ph. D.
OSKAR AUGUSTUS JOHANNSEN, Ph. D.
— *Members of the Station Staff*

OFFICERS OF ADMINISTRATION

OF THE UNIVERSITY

ROBERT JUDSON ALEY, President
JAMES NORRIS HART, Dean
CHARLES JOHN DUNN, Treasurer
ELIZABETH ABBOTT BALENTINE, Registrar
JAMES ADRIAN GANNETT, Commercial Secretary

OF THE COLLEGES AND EXPERIMENT STATION

LEON STEPHEN MERRILL, Dean of the College of Agriculture
JAMES STACY STEVENS, Dean of the College of Arts and Sciences
CHARLES DAYTON WOODS, Director of the Experiment Station
WILLIAM EMANUEL WALZ, Dean of the College of Law
HAROLD SHERBURNE BOARDMAN, Dean of the College of Technology

OF OTHER DEPARTMENTS

RALPH KNEELAND JONES, Librarian
EDGAR RAMEY WINGARD, Director of Athletics
RALPH RIGBY GLASS, In Charge of Military Instruction

*FACULTY OF INSTRUCTION AND INVESTIGATION

PROFESSORS

ROBERT JUDSON ALEY, PH. D., LL. D. — Campus
PRESIDENT

MERRITT CALDWELL FERNALD, PH. D., LL. D. — 54 Main Street
Emeritus Professor of Philosophy

JAMES MONROE BARTLETT, M. S. — College Street
Chemist in the Experiment Station

LUCIUS HERBERT MERRILL, SC. D. — 100 Main Street
Professor of Biological and Agricultural Chemistry

JAMES NORRIS HART, C. E., M. S., SC. D. — College Street
Professor of Mathematics and Astronomy
DEAN OF THE UNIVERSITY

FREMONT LINCOLN RUSSELL, B. S., V. S. — Campus
Professor of Bacteriology and Veterinary Science

JAMES STACY STEVENS, M. S., LL. D. — 99 Main Street
Professor of Physics
DEAN OF THE COLLEGE OF ARTS AND SCIENCES

CHARLES DAYTON WOODS, SC. D. — 55 Main Street
DIRECTOR OF THE EXPERIMENT STATION

JOHN HOMER HUDDILSTON, PH. D. — 105 Main Street
Professor of Greek and Classical Archaeology

WILLIAM EMANUEL WALZ, M. A., LL. B., LITT. D.
Professor of Law — 8 Fifth Street, Bangor
DEAN OF THE COLLEGE OF LAW

WILBUR FISK JACKMAN, B. S., PH. C. — 38 Pine Street
Professor of Pharmacy

RALPH KNEELAND JONES, B. S. — 26 Bennoch Street
Librarian

JACOB BERNARD SEGALL, PH. D. — The Colonial, Bangor
Professor of Romance Languages

* Arranged in groups in order of seniority of appointment

HAROLD SHERBURNE BOARDMAN, C. E. 40 Main Street
Professor of Civil Engineering
Dean of the College of Technology

GEORGE DAVIS CHASE, Ph. D. 59 Main Street
Professor of Latin

CAROLINE COLVIN, Ph. D. University Inn
Professor of History

ARTHUR CRAWFORD JEWETT, S. B. 104 Main Street
Professor of Mechanical Engineering

WARNER JACKSON MORSE, Ph. D. 33 North Main Street
Plant Pathologist in the Experiment Station

CHARLES PARTRIDGE WESTON, C. E., M. A. College Street
Professor of Mechanics and Drawing

RAYMOND PEARL, Ph. D. College Street
Biologist in the Experiment Station

PERCY ANDERSON CAMPBELL, M. S. A. Campus
Professor of Animal Industry

CHARLES BARTO BROWN, C. E. 97 Main Street
Professor of Railroad Engineering

WALLACE CRAIG, Ph. D. College Street
Professor of Philosophy

ROLAND PALMER GRAY, M. A. College Street
Professor of English

RALPH HARPER McKEE, Ph. D. College Street
Professor of Chemistry

GARRETT WILLIAM THOMPSON, Ph. D. 109 Main Street
Professor of German

CUY ANDREW THOMPSON, M. A. College Street
Professor of English Literature

WINDSOR PRATT DAGGETT, Ph. B. College Street
Professor of Public Speaking

OSKAR AUGUSTUS JOHANNSEN, Ph. D. College Street
Entomologist in the Experiment Station

MINTIN ASBURY CHRYSLER, Ph. D. College Street
Professor of Biology

JOHN MANVERS BRISCOE, M. F. The Colonial, Bangor
Professor of Forestry

LEON STEPHEN MERRILL, M. D. Campus
Director of Extension Work
Dean of the College of Agriculture

EDGAR RAMEY WINGARD, M. S. University Inn
Professor of Physical Culture
DIRECTOR OF ATHLETICS

ARTHUR JULIUS JONES, PH. D. 78 North Main Street
Professor of Education

GEORGE EDWARD SIMMONS, M. S. 1 Forest Avenue
Professor of Agronomy

GEORGE WARE STEPHENS, PH. D. 76 North Main Street
Professor of Economics and Sociology

WILLIAM EDWARD BARROWS, E. E. 6 Myrtle Street
Professor of Electrical Engineering

EDGAR MYRICK SIMPSON, A. B. 31 Highland Avenue, Bangor
Professor of Law

RALPH RIGBY GLASS, First Lieutenant, 21st United States Infantry 14 Fifth Street, Bangor
Professor of Military Science and Tactics

ARTHUR ADAMS, PH. D. Hartford, Conn.
Professor of English (Summer Term)

EDITH MARION PATCH, PH. D. University Inn
Associate Entomologist in the Experiment Station

HERMAN HERBERT HANSON, M. S. Forest Street
Associate Chemist in the Experiment Station

CHARLES EDWARD LEWIS, PH. D. 80 North Main Street
Associate Plant Pathologist in the Experiment Station

CHARLES WILSON EASLEY, PH. D. 7 Main Street
Associate Professor of Chemistry

EDSON FORBES HITCHINGS, C. E., M. S. Mill Street
Associate Professor of Horticulture

WILLIAM LEROY SLATE, JR. B. Sc. (Agr.) 61 Main Street
Associate Professor of Agronomy

ANDREW PAUL RACCIO, PH. D. University Inn
Associate Professor of Romance Languages

LEON ELMER WOODMAN, PH. D. 10 Oak Street
Associate Professor of Physics

PAUL LEONARD BEAN, C. E. Forest Avenue
Associate Professor of Civil Engineering

LAURA COMSTOCK 24 Main Street
Associate Professor of Home Economics

ALBERT THEODORE CHILDS, E. E. 55 Main Street
Associate Professor of Electrical Engineering

WINSLOW HOBART HERSCHEL, A. B. College Street
Associate Professor of Mechanical Engineering

GEORGE HENRY WORSTER, LL. M. 234 Center Street, Bangor
Associate Professor of Law

HARLEY RICHARD WILLARD, PH. D. 32 Main Street
Assistant Professor of Mathematics

ARCHER LEWIS GROVER, B. S. 40 Main Street
Assistant Professor of Drawing

TRUMAN LEIGH HAMLIN, M. A. Stillwater
Assistant Professor of Mathematics

WILLIAM FREEMAN SCHOPPE, B. S. 82 North Main Street
Assistant Professor of Animal Industry

ALICE MIDDLETON BORING, PH. D. University Inn
Assistant Professor of Zoölogy

BARTLETT BROOKS, A. B., LL. B. 10 Columbia Building, Bangor
Assistant Professor of Law

HARRY NEWTON CONSER, M. S., M. A. Oak Street
Assistant Professor of Botany

LLOYD MEEKS BURGHART, M. A. College Street
Assistant Professor of Chemistry

RALPH WOODBURY REDMAN, B. S. 59 Main Street
Assistant Professor of Animal Industry

JULIUS ERNEST KAULFUSS, B. S. Main Street
Assistant Professor of Civil Engineering

INSTRUCTORS

EVERETT WILLARD DAVEE College Street
Instructor in Wood and Iron Work

CHARLES JENKINS CARTER 6 Pine Street
Instructor in Machine Tool Work

LOWELL JACOB REED, M. S. College Street
Instructor in Mathematics

MAYNE ROSE CURTIS, M. A. University Inn
Assistant Biologist in the Experiment Station

ALBERT GUY DURGIN, M. S. Middle Street
Instructor in Chemistry

WALTER ELWOOD FARNHAM Forest Street
Instructor in Drawing

ROBERT RUTHERFORD DRUMMOND, PH. D. University Inn
Instructor in German

*SHERMAN DANIEL CHAMBERS, B. S. Ithaca, N. Y.
Instructor in Mathematics

WALTER EDMUND WILBUR, B. S. 5 Pine Street
Instructor in Mathematics

*ERNEST CONANT CHESWELL Boston, Mass.
Instructor in Electrical Engineering

ERNEST CLAUDE DREW, M. S. 16 Bennoch Street
Instructor in Physics

*VICTOR ALVIN KETCHAM, B. A., LL. B. Urbana, Ills.
Instructor in English

ROYDEN LINDSAY HAMMOND 59 Main Street
Seed Analyst and Photographer in the Experiment Station

CORNELIA PALMER 24 Main Street
Instructor in Home Economics

EARLE OVANDO WHITTIER, B. S. College Street
Instructor in Chemistry

CLAYTON ULREY, A. B. 208 Hannibal Hamlin Hall
Instructor in Physics

HOWARD MADISON PARSHLEY, A. M. 206 Hannibal Hamlin Hall
Instructor in Zoölogy

CARL HENRY LEKBERG, B. S. 82 North Main Street
Instructor in Mechanical Engineering

EDWARD ARTHUR STANFORD, B. S. West Kennebunk, Maine
Itinerant Instructor in Farm Management

EMILE SAM SAMRA, B. ès L. 405 Hannibal Hamlin Hall
Instructor in German

WEBSTER NEWTON JONES, M. A. College Street
Instructor in Industrial Chemistry

VICTOR GEORGE AUBRY, B. S. 205 Hannibal Hamlin Hall
Instructor in Animal Industry

HARRY WOODBURY SMITH, B. S. 307 Hannibal Hamlin Hall
Instructor in Agriculture

ALBERT VERRILL, B. S. North Main Street
Assistant Chemist in the Experiment Station

---

* Absent on leave from September 1, 1912, to September 1, 1913.

CLARENCE WALLACE BARBER, B. S. Campus
Assistant Biologist in the Experiment Station

EDWARD EUGENE SAWYER, B. S. Old Town
Assistant Chemist in the Experiment Station

HELEN WILLARD AVERILL, B. S. Park Street
Assistant Chemist in the Experiment Station

ALPHEUS CROSBY LYON, B. S. 1 Pond Street
Instructor in Civil Engineering

WILLIAM HINDS DARROW, M. A. 16 Bennoch Street
Instructor in Horticulture

CHARLES ANSON NASH, B. S. College Street
Instructor in Electrical Engineering

HENRY ROBBINS BARROWS, B. A. 106 Hannibal Hamlin Hall
Instructor in English

JOHN HARRY PARRY, B. A. 106 Hannibal Hamlin Hall
Instructor in English

LEROY FRANKLIN BLISS, B. A. College Street
Instructor in English

EVERETT HARLOW BOWEN, A. B., M. S., LL. B.
53 Fifteenth Street, Bangor
Instructor in Common Law and Pleading

BENJAMIN CALVIN KENT, B. S. 139 Pine Street, Bangor
Tutor in Mechanical Engineering

MAY ELLA TAFT, A. B., B. S. 14 Bennoch Street
Cataloger in the Library

CLARA PENNEY, B. S. 14 Bennoch Street
Assistant in the Library

GENEVA ALICE REED, B. A. College Street
Assistant in the Library

HELEN CHARLOTTE WORSTER, B. A. 33 Mill Street
Assistant in English

LECTURERS

LUCILIUS ALONZO EMERY, M. A., LL. D. Ellsworth
Lecturer on Roman and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D. Boston
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
107 Court Street, Bangor
Lecturer on Admiralty

ISAAC WATSON DYER, B. A. Portland
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

JOHN ROGERS MASON, A. M., LL. B. 384 Hammond Street Bangor
Lecturer in Bankruptcy Law

EMPLOYEES

ANDREW MAYHEW SHAW College Street
Superintendent of Greenhouses and Gardens

CHARLES HENRY BOLSTER Campus
Foreman of the Farm

HALSEY RICHARDSON WING Campus
Head Janitor and Meteorological Observer

GEORGE ABRAHAM COLBURN Bennoch Street
Head Carpenter

GRACE MARY COLBURN Bennoch Street
Cashier

FRANK EVANS OAK 239 Cedar Street, Bangor
Assistant to the Treasurer, and Bookkeeper

JENNIE HAMLIN WAITE University Inn
Secretary to the President

MARIETTA HOOVER DUNN Campus
Superintendent of Mount Vernon House

MARY ADELINE COBURN University Inn
Manager of the University Inn

GEORGE ALBERT YEATON Highmoor Farm
Orchardist in the Experiment Station

VIVIAN AUGUSTA PAGE 16 Bennoch Street
Stenographer in the College of Agriculture

BLANCHE FOLSOM POOLER Stillwater
Stenographer in the Experiment Station

ADDIE WEED Veazie
Office Stenographer

CEM MAE COOMBS Stillwater
Stenographer in the Experiment Station

MARGERY STORMANN Stillwater
Stenographer in the College of Technology

MARGARET DRUMMOND PENDLETON 124 Essex Street, Bangor
Stenographer in the College of Agriculture

ALICE WOODS AVERILL, 51 Mill Street
Laboratory Assistant in the Experiment Station

WALTER ANDERSON, Campus
Poultryman in the Experiment Station

HARRY ALEXANDER, Campus
Laboratory Assistant in the Experiment Station

WELLINGTON SINCLAIR, Monmouth
Superintendent of Experiment Station Farm, Monmouth, Maine

ELMER ROBERT TOBIE, B. S., University Inn
Inspector in the Experiment Station

EDGAR ALBERT WHITE, 28 Bennoch Street
Inspector in the Experiment Station

ESTELLA MORRISON, Campus
Computer in the Experiment Station

VERNON FOLSOM, Stillwater
Laboratory Assistant in the Experiment Station

STANDING COMMITTEES OF THE FACULTY

ADMISSION: Hart, Boardman, Merrill, Stevens, Walz

ADVANCED DEGREES: Chase, Colvin, McKee, Pearl, Segall, Walz

ATHLETICS: Wingard, Bean, A. J. Jones, R. K. Jones, Worster

ATTENDANCE: Brown, Craig, L. H. Merrill, Simpson, Stephens

AUDITING: L. H. Merrill, Brooks, Russell, Segall, Woodman

CHAPEL: Stevens, Barrows, L. H. Merrill, G. A. Thompson

COMMENCEMENT: Woods, Childs, Hitchings, R. K. Jones, L. H. Merrill

DELINQUENT STUDENTS: Boardman, Campbell, Chrysler, Segall, Walz

EMPLOYMENT: L. S. Merrill, Carter, Gannett

FITTING SCHOOLS: A. J. Jones, Chase, Gray, Hart, Weston

HEALTH: Wingard, Comstock, Jackman, Russell

Honors: Chrysler, Briscoe, Easley, G. W. Thompson

Library: R. K. Jones, Gray, A. J. Jones

Organizations other than Athletics: McKee, Boardman, Slate, G. W. Thompson

Publications: Stevens, R. K. Jones

Public Exhibitions: Gray, Daggett, Simmons, Willard

Rules: Jewett, Hart, L. S. Merrill

Schedule: Weston, Balentine, Hamlin, Reed

Social Affairs: Huddilston, Colvin, Comstock, Raggio, Wingard

Student Affairs: Hart, Boardman, Glass, L. S. Merrill, Stevens, Walz

GENERAL INFORMATION

HISTORY

The University of Maine is a part of the public educational system of the State. Its establishment followed the passage of an act of Congress, approved July 2, 1862, by President Lincoln, which provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings, and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out its purposes.

The State of Maine accepted the land grant and gave full assent to all the provisions and conditions of the act in a resolve of the Legislature of 1863, approved March 25. The Legislature of 1865, in an act approved February 25, created a corporation to act for the State in the administration of the affairs of the College, and defined its powers and duties. The original name of the institution was the State College of Agriculture and the Mechanic Arts. This was changed by the Legislature of 1897, and Commencement Day, June 23, of that year, was designated as the time when the change went into effect.

The first Board of Trustees was composed of sixteen members, one from each county, each county delegation in the Legislature selecting one member of the Board. The principle of county representation was abandoned in 1867, when the size of the Board was reduced. It now consists of eight members, seven of whom are appointed by the Governor with the advice and consent of the Council, and one by the Governor upon the nomination of the General Alumni Association.

The first class was admitted September 21, 1868. It had twelve members. The Faculty numbered two. By 1871-72, when the first class had become seniors, four curricula had been arranged,—Agriculture, Civil Engineering, Mechanical Engineering, and Elective.

The Legislative act which created the Board of Trustees directed that they should, "as soon as may be, arrange and make known the several courses of instruction which they will undertake at the outset of the College, and shall enlarge and improve the same whenever practicable." The development of the University has been in compliance with these directions. The College of Agriculture is the result of the enlargenment and improvement of the original curriculum in Agriculture, the College of Technology of the curricula in Civil and Mechanical Engineering, and the College of Arts and Sciences of the Elective curriculum.

The original single curriculum of the College of Agriculture continued with but minor changes for many years. A curriculum in Horticulture was added in 1902. The School Course in Agriculture was established in 1903. The curriculum in Agriculture was divided into Agronomy and Animal Industry in 1904, and the latter was subdivided into Animal Husbandry and Poultry Husbandry in 1909. The Extension department was organized in 1907. Although work in Home Economics was begun some years earlier, the Home Economics curriculum was not given in full until 1909.

The College of Technology has added to its two original curricula, Civil and Mechanical Engineering, Chemistry in 1874, Electrical Engineering in 1894, and Pharmacy in 1905. This college was the first to gain popularity and much of the success of the University as a whole is due to the immediate success of the engineering graduates of the early classes.

The College of Arts and Sciences has developed gradually, as the needs of the other colleges of the University and the demands of its own students have required, and as means have permitted, from the original Elective curriculum into an organization which not only provides required and elective courses for students in the other colleges of

the University but has also a well developed entity of its own. It offers men and women opportunities at the University of Maine equal to those of the New England colleges of the usual type. It has now thirteen departments in which students may select their major subject,—Biology, Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics, and Romance Languages.

The Maine Agricultural Experiment Station was established as a department by act of the Legislature of 1887, succeeding the Maine Fertilizer Control and Agricultural Experiment Station which had been established in 1885. The latter, although an organically independent institution, had been given accommodations by the College, and its property was transferred to the new station when that came into existence as a result of the passage of the so-called Hatch act by Congress, in 1887, and the acceptance of its terms by the Maine Legislature of the same year. In 1906, Congress passed the Adams act for the further endowment of the station established under the Hatch act. The work of the Station has developed so that it now has a staff for research and inspection composed of seventeen persons.

The College of Law was opened in 1898. It occupied quarters in the Exchange Building, at the corner of State and Exchange Streets, Bangor, until the Bangor fire of 1911. It is now located in a building of its own at the corner of Union and Second Streets, Bangor.

Graduate instruction has been given by various departments for many years. The first Master's degree was conferred in 1882. There is no provision for graduate work in advance of that required for the Master's degrees.

Summer schools were held in coöperation with the State Department of Education in 1895, 1896, and 1897. These were of three weeks each and they attracted chiefly teachers in elementary schools. Beginning with 1902, a Summer Term has been held annually, first of five weeks but now of six. It is designed for teachers in secondary schools and for college students who desire to take advantage of its opportunities, and it also gives some courses for those who seek an opportunity to make up entrance credits. In 1912, the departments offering courses were Chemistry, Economics and Sociology, Education, English, German, History, Latin, Mathematics and Astronomy, Physics, and Romance Languages. Provision was made also for instruction in manual training, and a three-weeks course in rural economics was given.

The University in coëducational, women having been admitted since 1872, in compliance with special legislative enactment.

ENDOWMENT AND INCOME

The State of Maine received by the act of Congress above referred to 210,000 acres of public land from which an endowment fund of $118,300 was realized. Former Governor Abner Coburn, of Skowhegan, for many years President of the Board of Trustees, made a bequest of $100,000 to the institution. These two funds yield respectively 5% and 4% annually.

Under acts of Congress, approved August 30, 1890, and March 4, 1907, the University receives $50,000 annually from the United States.

Under an act of the Legislature, approved April 2, 1909, the University received $100,000 for each of the years, 1909, 1910, 1911, and 1912, for buildings and maintenance.

Under acts of Congress approved March 2, 1887 and March 17, 1906, Agricultural Experiment Station. Students fees and miscellaneous receipts complete the income.

LOCATION

The university campus has a beautiful location in the town of Orono, Penobscot county, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater River, a branch of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The cars of the Bangor Railway and Electric Company run through the university grounds. Visitors may find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located at the corner of Union and Second Streets, Bangor.

BUILDINGS AND THEIR EQUIPMENT

Alumni Hall.—This is a brick building, erected in 1900. It was given its name because funds required for its erection were subscribed by alumni of the University. The front part contains on the ground floor the offices of the President, the Dean of the University, the Registrar, the Treasurer, and the Commercial Secretary, the Trustees' room, the university post office, and two recitation rooms for the use

of the department of Mathematics. The second floor contains the university chapel with a large pipe organ in the choir gallery, and the gymnasium and drill hall. The dimensions of the gymnasium are 100 by 72 feet. It is equipped with complete apparatus of the most approved kind, and is encircled by a nine-foot running track suspended from the roof. Under the gymnasium are offices of the Professors of Physical Culture and Athletics and Military Science and Tactics, the baseball cage, lockers, lavatories, and store rooms.

Coburn Hall.—This building was erected in 1888 for the departments of Natural History and Agriculture. It was named for ex-Governor Abner Coburn of Skowhegan, Governor of Maine, 1863-64, President of the Board of Trustees, 1867-79, and chief individual benefactor of the University. It is now occupied chiefly by the department of Biology and the museum. It is a brick building three stories in height. In the basement are a laboratory for animal and plant physiology, a taxidermist's laboratory, and the University Store; connected with it is a small greenhouse for the use of the department of Biology. On the first floor are a research zoölogical laboratory, three class rooms, and part of the museum. On the second floor are the botanical and zoölogical laboratories and offices, a lecture room, and part of the museum. On the third floor are two large rooms, one containing the remainder of the museum, the other forming a spacious lecture room.

Estabrooke Hall.—This building is named for Professor Horace M. Estabrooke, head of the department of English from 1891 until his death in 1908. It is a wooden building, formerly the Commons, remodeled in 1911 for the use of the department of English. It contains four recitation rooms for large sections, two smaller rooms for consultation purposes, and four offices for members of the department.

Fernald Hall.—This is the oldest building on the campus, erected 1868-70 for the department of Chemistry. It was named for Merritt C. Fernald, LL. D., the first member of the faculty appointed, and who retired in 1908. He was Acting President, 1868-71, and President, 1879-93. It is a two-story brick building, containing seventeen rooms. The balance rooms, a small lecture room, three offices, and the laboratory for advanced students are on the ground floor. Upon the second floor are a large lecture room, the laboratory for freshman work, a recitation room, an office, and the supply room, Under the roof are

arranged the mineralogical laboratory, dark rooms, and a laboratory for qualitative analysis. An assay laboratory, a laboratory for water and gas analysis, a room for work in physical chemistry, and store rooms are in the basement.

Holmes Hall.—This is a two-story brick building erected for the Maine Agricultural Experiment Station. The central portion was built in 1888, the south wing was added in 1899, and the north wing in 1904. It is named for Dr. Ezekiel Holmes, of Winthrop, pioneer in scientific agricultural investigation, founder and first secretary of the State Board of Agriculture, founder of *The Maine Farmer,* and its editor until his death in 1865, and most active in securing the establishment of the State College of Agriculture and the Mechanic Arts as an independent institution. On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, drugs, and fertilizers; the laboratory for vegetable pathology; and the biological laboratories. The general office and mailing room, the Director's Office, the laboratory for seed testing and photography, the entomological laboratories, and the library are on the second floor. In the basement are rooms for the boiler, for the gas machine, for the grinding and preparation of samples, and for the calorimeter; culture and preparation rooms used by the plant pathologist; and rooms for the storage of fuel, chemicals, and glass ware. The large attic is used for the storage of samples and supplies. The building is connected with the steam heating plant, supplied with gas and electricity, and is thoroughly equipped with apparatus for the work of agricultural investigation. An attached greenhouse is used by the entomologist and plant pathologist.

Lord Hall.—This is a brick building, completed in 1905, erected for the departments of Electrical and Mechanical Engineering. It is named for the Honorable Henry Lord of Bangor, member of the Board of Trustees, 1891-1908, and its President, 1892-1908. It consists of a main part, 82x56 feet in area and two stories in height, and an ell, 125x42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc. For tests of materials there are two Riehlé power-operated testing machines, one of 60,000 lbs. capacity for tensile, compressive, and

transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necessary for the study of engine performance. The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. These are all well equipped. The forge shop had complete new apparatus installed a few years ago. The forges are of the Sturtevant down draft type. New benches and new lathes have been installed in the pattern shop, and also new lathes of the highest type in the machine shop. The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible, and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volt alternating current system to direct current by means of rotary converters and belted alternating current motors driving direct current generators. In addition to volt-meters, ammeters, and watt-meters for both direct and alternating currents, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self-starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Wingate Hall.—This is a brick building, erected in 1891-92 for the engineering departments. It stands on the site of White Hall, the first building erected for college uses, burned in 1890. It is named for Honorable William P. Wingate of Bangor, who first suggested and was most active in securing the location of the institution in Orono. He was a member of the Board of Trustees, 1867-84, and its President, 1879-83. It is now occupied by the departments of Civil Engineering, Latin, Mechanics and Drawing, and Physics. On the ground floor are three recitation rooms, instrument rooms, an optical room, and the offices of the professors of Civil Engineering and Mechanics and Drawing, and the Dean of the College of Technology. On the second floor are the offices and recitation room of the professors of Physics and Latin, two physical laboratories, and the physical apparatus rooms. On the third floor are two large, well lighted drawing rooms for the use of the departments of Civil Engineering and Mechanics and Drawing, and a filing room containing a collection of blue prints belonging

to the department of Civil Engineering. In the basement are the electrical laboratory and the photometer room of the department of Physics, and the cement testing laboratory. On the fourth floor is another photometer room for the use of students in Physics. Meteorological records for the United States Government are kept in this building.

Winslow Hall.—This building was erected in 1908 for the various departments of the College of Agriculture. It is named in honor of the Honorable Edward B. Winslow of Portland, member of the Board of Trustees, 1898-1911, and its President, 1908-11. It is the largest building on the campus. The ground plan measures 63x100 feet and the building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors including a well lighted basement for lecture rooms and laboratories. On the first floor are the offices of the Dean of the College of Agriculture, the faculty room and library, the offices and class rooms of the professors of Agricultural Chemistry, Animal Industry, Bacteriology and Veterinary Science, and the office and filing room of the Extension department. On the second floor are the offices of the departments of Agronomy, Farm Management, Forestry, and Home Economics; the agronomy and forestry lecture rooms; farm crops laboratory with seed and plant storage rooms; bacteriological laboratory; and the laboratory and dining room of the department of Home Economics. Across the front of the building on the third floor are the office, class room, refrigerator, and laboratories of the department of Horticulture. The remaining half of this floor is occupied by a large lecture room, a drawing room, and a room used for domestic art; the two latter are separated from the larger room by folding doors, so that the three rooms can be thrown into a large auditorium. The basement is built high above the grade line so that light and ventilation are good. It contains a lecture room, the agricultural and biological chemistry laboratory, the soil physics laboratory, a laundry for the department of Home Economics, and a dark room for photography. The interior finish and furniture are in dark stain, and the building is equipped with electric lights, elevator, hot and cold water, gas, and high pressure steam for laboratory work.

Library Building.—The Library building is of stone, two stories above a basement which is almost entirely above the ground level, and is surmounted by a dome. It was completed in 1906. For its erection

and furnishing, Mr. Andrew Carnegie gave $55,000, and the Hallowell Granite Works furnished the granite at a price that was equivalent to a gift of several thousand dollars.

The first floor contains an entrance hall, open to the dome, reference and periodical rooms, the librarian's office, a room for reserved books, and a women's room. The second floor contains a general lecture room with seating capacity of 150, and five seminar rooms. On the walls of the gallery, the lecture room, and the delivery room is the art collection of the University. The basement contains a newspaper room, store room, janitor's room, men's room, and a club room designed primarily as a meeting place for various student organizations.

The stacks are in the rear of the main building, and are freely accessible. They contain shelf room for 60,000 volumes, and a cataloger's room.

The Library Building is well lighted and heated and is thoroughly ventilated. It is connected by telephone with all other important university buildings.

College of Law Building.—The building is situated in Bangor, corner of Union and Second Streets. It is in one of the finest parts of the city, on the car line, in a very quiet neighborhood, and within a few minutes' walk from the Court House, the Y. M. C. A., the business section of the city, and the M. C. R. R. station. The grounds about the building occupy nearly a whole square. They are surrounded by elms and afford ample space for tennis courts. The building itself is a brick structure, three stories high. There are twelve large, commodious, and well lighted rooms in the main part. Those on the first floor are used as recitation rooms. There are four large rooms on the second floor devoted to library and office purposes, and four rooms on the top floor, one large enough to constitute a fine dormitory hall. The building is lighted and heated throughout by gas and steam heat.

Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a combined transit instrument and zenith telescope of three-inch aperture constructed by Bomberg, and a Respold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

Dairy Building.—The dairy building, 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese-curing room, and a testing laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is supplied with hot and cold water. Power is furnished by a six horse-power engine.

Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. The building is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

Poultry Plant.—The poultry plant of the College of Agriculture consists of a two and a half story building, 25 x 40 feet, the lower portion of which is designed for an incubator room and is built of brick with non-conducting walls. On the upper floors is located a poultry apparatus laboratory. Attached to this building is a brooder house, 15 x 40 feet, for winter brooding. It is equipped with a hot water heater. The fattening and killing house is 14 x 45 feet, with an interior arrangement to demonstrate crate fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room, and is equipped with water heater and cooling tanks. The several breeds of poultry kept by the College of Agriculture are housed in colony houses of various styles and sizes, and one long laying-house, 14 x 96 feet, divided into twelve pens especially adapted for instructional purposes. The poultry plant belonging to the Experiment Station contains an incubator house 31 x 31 feet, with tenement above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two-story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2500 chicks.

Stock Judging Pavilion.—Located about fifty feet to the rear of Winslow Hall is an octagonal structure fifty feet in diameter, built of similar materials and used for scoring and judging stock. In the center of the structure is a ring twenty-five feet in diameter, and surrounding this are six rows of seats arranged in amphitheatre style. The building has a seating capacity of about six hundred and can be used for meetings too large for any of the rooms in Winslow Hall.

Farm Buildings.—The lower barn, 100 x 50 feet, contains a cow stable with 26 stalls, two grain rooms, three bull rooms, and silo; and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, and an electric motor for power. The barns are lighted by electricity and supplied with water and steam. The basements of the barn contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, is of special design and contains six large pens, a nursery, and a storage room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery. The upper floor of one is used as a laboratory for classes in farm machinery. A modern piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed-cooking rooms. A ten-room farm cottage, occupied by the men employed in the different departments comprising the College of Agriculture, has also been erected. The farm of the University of Maine is composed of two parcels of land aggregating 473 acres, of which 120 acres are under cultivation. The cultivated land is handled according to a definite system of rotation of crops, including hoed crops, nurse crops, and hay crops. Such grains as oats, barley, rye, and wheat are grown extensively, and potatoes and corn form a large part of the crops of the farm. The hay acreage cuts considerably more than 100 tons annually. The fertility of the land is maintained by applications of lime, barnyard dressing, commercial fertilizers, and by the turning under of green crops once in four years. It is the aim of the management to make the farm support the live stock maintained upon it. The areas of permanent pasture land form a considerable part of the farm and the remainder of it is given up to forest and orchard areas. Highmoor Farm, purchased by the State Legislature for the use of the Experiment Station, is described under that department of the University.

Hannibal Hamlin Hall.—This is a men's dormitory, completed in 1911, named for the Honorable Hannibal Hamlin, of Hampden and Bangor. Mr. Hamlin held many offices of honor and responsibility, including that of Vice President of the United States, 1861-65. Mr. Hamlin represented Penobscot County in the original Board of Trustees and was its first President, serving 1865-66. This building is of brick with stone trimmings. It is 35 feet wide and 168 feet long. It has four stories founded on a high, well lighted concrete basement, in which are located a dining room 32 by 90 feet, recreation room 26 by 32 feet, waiters' room 12 by 18 feet, with lavatory, toilet, and locker room, and room for training table 12 by 26 feet. In a one-story ell ad-

joining the basement is the kitchen, 32 by 34 feet, with pantry, ice room, coal room, toilet room, and closet. From the basement up, the building is separated into three sections by two 12-foot brick fire walls, which extend up through the roof. Each section has its own entrance, vestibule hall, and corridor. The first story of the central section has a reception hall and living room, with bath, lavatory, and shower bath on one side of the corridor, and on the other side the Young Men's Christian Association rooms with toilet and lavatory. The central section in the second, third, and fourth stories is divided in each story into four chambers, with shower bath and lavatories. The two end sections in each of the four stories are divided into four suites of two bedrooms and a study room, with a toilet, lavatories, and shower bath for the use of the four suites. The interior is of ash. The building is heated by steam and lighted by electricity. There are 96 rooms in the two end sections and 17 in the central section, making a total of 113 rooms above the basement. Each bedroom has an ample clothes closet.

Oak Hall.—This is a men's dormitory, erected in 1871. It is named for Honorable Lyndon Oak, of Garland, member of the Board of Trustees, 1867-89, its Clerk, 1871-83, and President, 1883-89. It is a substantial brick building of four stories and has forty-nine rooms for students. It contains bath rooms, is heated by steam and lighted by electricity, and is connected with Hannibal Hamlin Hall by a covered passage way.

Mount Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings upon a site overlooking the campus, and commands a beautiful view of the river, villages, and hills. It is two stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor, dining-room, kitchen, bath-room, and ten study rooms intended for two students each. The rooms are large, well lighted, heated by steam, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. The Mount Vernon House is under the supervision of a superintendent.

The Infirmary.—A wooden building has been erected in the rear of Hannibal Hamlin Hall to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for

women, as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Central Heating Plant.—The central heating station is located across the car tracks from the university buildings, just above the Sigma Alpha Epsilon house, and on low ground so that practically all the buildings to be connected will drain by gravity to the plant, thus saving the pumping or lifting of the returns. The station is a plain red brick structure, without any attempt at ornamentation, but of good proportions, and large enough to provide room for present needs and allow for considerable future extension. All necessary provisions have been made for the future installation of engines and generators to furnish light and power for the University when practicable. This plant supplies heat to nearly all the university buildings.

Power House.—This wooden building, 30 x 56 feet, north of Alumni Hall, formerly the power and heating plant of the University, is now used exclusively for laboratory purposes in connection with the department of Mechanical Engineering. It contains two boilers, a one hundred and fifty horse-power Babcock and Wilcox and an eighty-five horse-power Heine, a fifty horse-power Corliss engine, a fifteen horse-power Otto gasolene engine, a plain slide valve engine, and two dynamos with operating switchboard.

Fraternity Houses.—The local chapters of Beta Theta Pi, Delta Tau Delta, Kappa Sigma, Phi Gamma Delta, Phi Kappa Sigma, Sigma Alpha Epsilon, and Theta Chi, and the local fraternity Phi Eta Kappa have built houses on the campus; the local fraternity Theta Epsilon leases a house on the campus from the University; the local fraternity Delta Kappa owns a house adjoining the campus on College Street, and the local chapters of Alpha Tau Omega and Sigma Chi own houses on North Main Street.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, and six residences occupied by members of the faculty.

Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus, about 1,200 feet from the

gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and field athletics.

THE LIBRARIES

The universities libraries contain over forty-eight thousand volumes, of which slightly over three thousand are in the law library at Bangor, slightly over thirty-five hundred in the Maine Agricultural Experiment Station library in Holmes Hall, and the balance in the general library. Such volumes as are required for departmental use are deposited temporarily in other buildings, where they may be consulted.

More than half of the volumes in the libraries have been added within ten years, and the greater part have been acquired by purchase. Most of the books bought are selected by heads of departments. The collection is of far greater working value than many libraries containing a much greater number of volumes.

The valuable horticultural library of the late Professor Welton M. Munson was bequeathed by him to the University.

The new law library is particularly well selected; the old library was destroyed in the Bangor fire of 1910.

The station library contains many very valuable sets of scientific periodicals and only in exceptional cases does it duplicate books in the general library.

The general library is open daily during term time from 8.00 A. M. to 5.30 P. M., and from 7.00 to 9.30 P. M., except Sundays and holidays. It is open Sunday afternoons from 2.30 to 5.30, and on holidays from 8.00 A. M. to 12.00 M. Students may borrow three volumes at a time, to be retained three weeks; if a larger number are desired, application should be made to the Librarian. Officers of the University may borrow any reasonable number of volumes, without time limit except that any book may be recalled at any time, and all books must be returned prior to Commencement. Other responsible persons may obtain the privileges of the library upon application to the Librarian.

The libraries are classified by the Dewey decimal system, modified for certain classes. There is a card catalog, author and subject, near the delivery desk. It includes all volumes in the general, the law, and the station libraries.

It is the desire of the university authorities to make the library as useful as possible to all citizens of the State so far as this may be done without interference with its primary purposes.

MUSEUM OF NATURAL HISTORY

MINTIN ASBURY CHRYSLER
Curator of the Botanical and Zoölogical Collections
LUCIUS HERBERT MERRILL
Curator of the Geological Collections

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building.

Geological Collections.—These collections, occupying the upper floor of the wing of Coburn Hall, are accessible daily during the college year except on Saturdays and Sundays. They include the more important fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the State; a general collection of more common minerals; a collection of economic minerals furnished by the United States National Museum; an educational series of rocks furnished by the United States Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the State may be made of great value, both from the scientific and economic standpoint. Students and others residing in the State are urged to contribute specimens from their home localities. Valuable accessions have been received from the United States National Museum.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formaline material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the State; a small set of exotic mammals; a more complete working collection of native birds, birds' nests, and eggs; an illustrative collection of the other groups of vertebrates; a rather large collection of the shells of native and exotic molluscs; and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall. The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents more especially the flora of Maine and other New England states, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor Harvey

left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticæ, Cummings and Seymour's North American Lichens, and a collection of economic seeds prepared by the United States Department of Agriculture.

Collections other than the herbarium include exhibits illustrating the manufacture of paper and of cocoa, the wood and bark features of the timber trees of Maine, conifers mounted in jars, plants used in pharmacy, commercial fibres, and artificial silk. The valuable collection of fossil plants presented by the late Professor Harvey occupies two cases.

THE ART COLLECTION

The collection consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library Building, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

With the organization of the Classical departments in 1899 a beginning was made in the establishing of an art collection which would serve to vitalize and intensify the work in the humanities.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University is fortunate in possessing many of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library Building contains examples of the work of the chief Florentine and Umbrian masters of the 14th and

15th centuries, arranged on the walls in historical sequence. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the departments of Greek and Latin have a large collection of photographs and lantern slides. A stereopticon lantern is a part of the regular equipment in classics and art.

ORGANIZATIONS

University of Maine Society of Civil Engineering.—This society is composed of the members of the senior and junior classes who are enrolled in the curriculum in Civil Engineering. The object of the society is to investigate by reading and discussion the various engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of other institutions and by practicing engineers.

The affairs of the society are controlled by the students under the advice of the head of the department of Civil Engineering.

University of Maine Branch of the American Society of Mechanical Engineers.—A regularly organized branch of this national society holds regular meetings for the presentation and discussion of engineering papers by members and by visiting engineers.

Agricultural Club.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

University of Maine Branch of the American Institute of Electrical Engineers.—This is an ogranization for the promotion of the student's interest in electrical engineering work, and to keep him in touch with the latest developments in this branch of engineering activity. Membership in the branch is extended to members of the Electrical Engineering faculty, students pursuing the Electrical Engineering curriculum; and to members and associate members of the American Institute.

American Chemical Society.—The Maine Section of the American Chemical Society has its headquarters at Orono. Some students in the department of Chemistry are members, and all are welcome to its meetings.

Maine Masque.—This is a dramatic club which aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all undergraduates are eligible.

Deutscher Verein.—This society, organized in 1902, is composed of teachers and students. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

Cercle Français.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

Round Table.—The Round Table is an organization composed of the women of the faculty, the wives of the professors and instructors, and other women interested in the University. Its purpose is to promote the social welfare of the students.

Arts Club.—This is a club composed of the professors and instructors in the College of Arts and Sciences with their wives. It meets monthly and discusses various subjects of general interest.

Young Men's Christian Association.—The Young Men's Christian Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Library Building and classes for the study of the Bible are conducted on Sunday. This association is a branch of the national Young Men's Christian Association.

Young Women's Christian Association.—This is an organization for religious work composed of women students.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the spring semester of the junior year the five members of the class having the highest standing are elected members, and at the end

of the fall semester of the senior year the five next highest in the collegiate departments, and two from the College of Law, are added.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing, or to those who have shown marked ability along the lines of agricultural study and research.

Tau Beta Pi.—Tau Beta Pi is an honor fraternity for engineers and has chapters in about twenty-five of the leading universities and technical schools. Elections to the fraternity take place twice a year, and are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

Alpha Chi Sigma.—Alpha Chi Sigma is a professional fraternity with chapters in about twenty American universities. The members are elected from those whose major work is in the department of Chemistry.

UNIVERSITY PUBLICATIONS

Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the Trustees and President includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station.

University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public. Among recent issues are bulletins relating to the Classical Curriculum, the Curricula in Agriculture, the Curriculum in Pharmacy, the College of Law, the College of Arts and Sciences, the College of Technology, the Curriculum in Forestry, the Courses in Education, the Summer Term, Student Expenses, and an Alumni Directory.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the State by the department of Agricultural Extension.

Annual Report of the Experiment Station, and the Experiment Station Bulletins.—These give complete results of the work of investigation of the Station.

Official Inspections.—These are published by the Experiment Station, and contain the results of the work of inspection of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs, foods, fungicides and insecticides.

The Bulletins and Official Inspections are sent free on request to any resident of Maine.

Maine Campus.—This is a journal published weekly during the academic year by an association of the students.

Prism.—The Prism is an illustrated annual, published by the junior class.

Practical Husbandry.—This is a quarterly magazine published under the direction of the Agricultural Club. It is devoted to practical and technical agriculture.

Maine Law Review.—This is a magazine published under the direction of the students of College of Law. It is devoted to a discussion of law cases and other current legal problems.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammunition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of four companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the olive-drab service uniforms prescribed for infantry officers of the United States Army, except that "Maine" insignia and buttons are used; for non-commissioned officers,

the olive-drab service uniforms of the United States Army, except that "Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14.15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty.

The three seniors who attain the highest standing in the military department are reported to the military secretary of the United States Army, and their names are printed in the Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

With the exceptions noted below, all men students physically qualified are required to take military work for three hours a week during their first and second years at the University. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years course. After the freshmen and sophomore years the work is elective. Students in the College of Law, the School Courses in Agriculture, the two years curriculum in Pharmacy, and graduate students are excused from military work.

The grades and relative rank of Officers and non-commissioned officers will be determined by the Professor in charge, subject to the approval of the President.

PHYSICAL TRAINING

Physical training is required of male freshmen three hours per week. All other students may elect this work and receive credit. Credit is given on the basis of three hours of physical training to one hour of recitation. Students registered on athletic teams are excused in the regular athletic training, but no credit will be given for the athletic training unless the physical training is taken for the remainder of the year. Every student who registers for an athletic team must first pass a required physical examination.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the director, the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. It is supplied with an equipment

of modern apparatus for heavy and light gymnastic work. There is a floor space of 6,262 square feet and an overhead running track.

The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220-yard straightaway and is graded and laid out for football, baseball, and track athletics. Here the men may exercise for recreation or train for active competition. There are several tennis courts on the university campus. On the Stillwater river canoeing may be enjoyed, as well as skating and ice hockey in the winter.

All students exercising at class hours wear a regulation suit which consists of white shirt, white running pants with blue stripe, and white rubber sole shoes.

It is the aim of the department to encourage participation in all forms of wholesome out-door exercise and to arouse a general interest in athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for athletic teams, with whose supervision the department is charged.

PUBLIC WORSHIP

Short religious services are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association and the Young Women's Christian Association, are held twice each week.

GENERAL INFORMATION

It is assumed that all students entering the University are willing to subscribe to the following:

A student is expected to show both within and without the University respect for order, morality, and the rights of others; and such sense of personal honor as is demanded of good citizens and gentlemen.

A pamphlet containing information in regard to the selection of studies, standing and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel,

penalties, examinations, athletics, and student organizations may be obtained from the Registrar.

The quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of twenty-two hours of classroom work each week. In the application of this rule, two or three hours of laboratory work count as one hour. Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise. Any student absent in one semester nine times from a course scheduled five times a week, or eight times from a course scheduled four times a week, or six times from a course scheduled three times a week, or four times from a course scheduled twice a week, or three times from a course scheduled once a week must immediately give the reasons for his absence to the committee on attendance. Explanations should cover all absences. If the committee do not find his explanation satisfactory he will be dropped from that course.

Written examinations are held immediately before the beginning of the fall semester for all studies in arrears, and during the spring recess for fall semester arrearages. A student absent form the University by permission of the Faculty, at the time of these arrearage examinations, or at the time of a final examination, may have a special examination at such time as may be arranged with the instructor under whom the arrearage occurred. For such a special examination a fee of two dollars shall be paid to the University. A student who fails to make up an arrearage in a required subject before the study is again given in class is required to attend recitations in that study.

Each student is given a report of his work shortly after the close of each semester. Parents or guardians may obtain these reports upon application to the Registrar.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average grade of B, after the freshman year. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average of B in all previous work, and an average grade of A or B in all previous work

of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester. Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the Faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory work may be tested by examination, or thesis, or both, at the discretion of the committee. The Faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees

The degree of Bachelor of Arts (B. A.), with specification of the major subject, is conferred upon all students who complete a curriculum in the College of Arts and Sciences. These students are required to fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science (B. S.) in the curriculum pursued is conferred upon students who complete the prescribed work of four years in the College of Agriculture and Technology.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the prescribed work in the College of Law.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the two-year Pharmacy curriculum.

Theses shall be printed, or typewritten in black record unless the subject matter prevents, and the paper used shall be a standard thesis

paper 8 x 10½ inches which may be procured at the University Store. Care should be taken to have a margin of one inch on the inner edge, at least one-half inch on the outer edge, one and one-half inches at the top, and one inch at the bottom of the page.

If drawings accompanying the thesis they may be bound in with the rest of the pages or placed in a pocket in the third page of the cover, or if too many for this, they may be bound separately according to personal instructions of the head of the department.

For further information see pamphlet relating to degrees and theses.

Candidates for degrees who fail to meet these requirements will not be awarded their degrees at Commencement. A minimum residence of one year is required for the attainment of any Bachlor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each semester or term. Those entering the University after that date must obtain the consent of the committee on advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts, Master of Science, or Master of Laws must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degrees.

No work done before the conferring of the Bachelor's degree shall be counted toward the Master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The courses of study for each candidate must be approved by the committee on advanced degrees not later than the fourth week of the semester or term.

A registration fee of $5 is charged, and an additional fee of $15 for examinations and diplomas is payable upon the completion of the work. One registration fee only is required of graduate students.

The curriculum shall include work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

The candidate shall prepare as a part of his curriculum a satisfactory thesis on some topic connected with the major subject. Theses must be submitted not later than May 20th. The same regulations regarding the size and style of binding, outlined under the Bachelor's degree, apply here. (See pamphlet relating to theses.)

The professional degrees of Chemical Engineer (Ch. E.), Civil Engineer (C. E.), Electrical Engineer (E. E.), and Mechanical Engineer (M. E.) may be conferred upon graduates in the curricula of Chemistry or Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering respectively, upon the presentation of a satisfactory thesis after at least three years of professional work subsequent to graduation. During at least two of the years after graduation the candidate must have occupied a position of responsibility. A fee of $5.00 is required at the time of registration. A fee of $10.75 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

These estimates are prepared upon the basis of students living in University halls.

Estimates of Annual Expenses for Men

	Students from within the State	Students from without the State
Registration	$10.00	$10.00
Incidentals	20.00	20.00
Tuition	30.00	40.00 to $70.00
Laboratory Fees	10.00 to $25.00	10.00 to 25.00
Text-books	10.00 to 30.00	10.00 to 30.00
Board 36 weeks @ $3.50	126.00	126.00
Room Dormitory	36.00 to 45.00	36.00 to 45.00
	$242.00 to $286.00	$252.00 to $326.00

Note. The tuition charge of $70.00 is for technology students from without the State.

Estimates of Annual Expenses for Women

The expenses for women are the same as for men, except that the annual charge for board and room is uniformly $170.00.

Exceptions

By legislative enactment, students in an agricultural curriculum except in Forestry and Home Economics, are exempted from the payment of tuition charges. This applies both to students from within and from without the State. For such students the above estimates should be reduced by an amount equal to the tuition charge.

Details of Laboratory Fees

The laboratory charges indicated above are made to cover cost of material used by the students. These charges vary with the subject and length of the course. They are as follows: Bacteriology, per course, $3.00; Biology, per course, $2.00 to $3.00; Chemistry, per course, $2.00 to $5.00; Civil Engineering, per course, $2.00 to $5.00; Electrical Engineering, per course, $2.50; Mechanical Engineering, per course, $2.00; Mineralogy, per course, $2.00; Pharmacy, per semester, about $3.50; Physics, per course, $2.50 to $3.50; Shop Work, per course, $4.00 to $5.00.

Special Charge

A fee of $2.00 is charged a student for each special examination.

Dormitory Rooms

The rooms in the Mt. Vernon House, Oak Hall, and the middle section of Hannibal Hamlin Hall accommodate two students each. All other rooms accommodate four students each.

Dormitory charges include steam heat and electric lighting. The rooms in the dormitories for men are furnished with beds, mattresses, chiffoniers, desks, and chairs. The rooms in Mt. Vernon House (the dormitory for women) are furnished with all the larger articles of furniture. Each resident in a dormitory has bed linen and three towels laundered each week without extra charge.

Women students not living at home are required to live at the Mt. Vernon House. In exceptional cases women students are allowed to live at some boarding house approved by the President. To secure the reservation of a room in a University dormitory, application, accompanied by a deposit of $5.00, should be made on or before September 1.

Deposits to Cover Expenses

Each student on or before registration day is required to make a deposit in accordance with the following table:

	Students from within the State	Students from without the State
Students in Agriculture	$95.00	$95.00
Students in Forestry	110.00	115.00
Students in Home Economics.....	110.00	115.00
Students in Arts and Sciences....	110.00	115.00
Students in Technology	110.00	130.00

For a student not living in a University dormitory the above deposits are reduced by $75.00.

Expenses at the College of Law

For expenses of students in the College of Law see the article on that college.

Communications

Communications with reference to financial affairs of students should be addressed to the Treasurer, University of Maine, at Orono.

Athletic Contributions

Students generally contribute $10.00 annually to the support of athletics. This is not a University requirement, but is wholly voluntary.

THE KITTRIDGE LOAN FUND

The fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittridge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security, but personal notes bearing interest at the prevailing rate, should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

THE KIDDER SCHOLARSHIP, thirty dollars, was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University of the class of 1879, and is awarded to a member of the junior class to be selected by the President and the Faculty.

WESTERN ALUMNI ASSOCIATION SCHOLARSHIP.—Tuition for the sophomore year, is awarded that student taking a regular course whose deportment is satisfactory and who makes good progress in his studies during his freshman year.

JUNIOR EXHIBITION PRIZE, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

SOPHOMORE DECLAMATION PRIZE, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

WALTER BALENTINE PRIZE, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., LL. D., Geneva, N. Y., a graduate of the University of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

KENNEBEC COUNTY PRIZE, twenty-five dollars, the gift of Hon. William T. Haines, LL. D., Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best thesis on applied electricity.

FRANKLIN DANFORTH PRIZE, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the agricultural curriculum who attains the highest standing.

PHARMACY PRIZE, five dollars, is awarded to that student in the pharmacy department who attains the highest standing in chemistry in the last year of his course.

HOLT PRIZES, the gift of Dr. Erastus Eugene Holt, of Portland, are given to the three students of the senior class who show the greatest

improvement in their physical rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body, devised by Dr. Holt.

New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. It has for some years been awarded to the student who excelled in debate.

Pittsburg Alumni Association Scholarship, tuition for one year, is awarded to a member of the junior class in the College of Technology, to be selected by the President and the professors in that college.

L. C. Bateman Prize, five dollars, is awarded to the student who shall write the best newspaper article of one column length.

Lewiston Journal Prize, ten dollars, is awarded to a student in the College of Agriculture who shall excel in some line of work connected with dairying.

American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the Faculty, to the member of the senior class in Pharmacy who has made the best record in his college course.

Fraternity Scholarship Cup, presented to the University by the 1910 Senior Skull Society, is awarded at Commencement to that fraternity having the highest standing in scholarship for the preceding calendar year. The cup is to be awarded for eleven years, 1910 to 1920 inclusive. The fraternity to which this cup is awarded the greatest number of times is to be the permanent owner of the cup.

Wingard Cup, the gift of Professor E. R. Wingard, is awarded to that student who has won his "M" in athletics, and who has made the greatest improvement in his studies during the year.

Class of 1908 Commencement Cup, is awarded each year to the class having the largest percentage of its membership back for Commencement.

Father Harrington Prize, twenty dollars, established by Rev. John M. Harrington, pastor of St. Mary's Church, Orono, is given to that student who writes the best essay upon modern literature. It may

treat of German, English, French, Spanish, or Italian literature. The essay may be limited to any one of these literatures or to a comparative study of any number of them. This is open to any student in the University.

The College of Technology Prize, twenty-five dollars, is awarded to the student who attains the highest rank in the College of Technology during 1912-1913, and shall make an "M" in track, baseball, or football.

ADMISSION

General Requirements.—Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and make a cash deposit covering the bills of one semester. In the College of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of B must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Graduates of a college of equivalent standing who wish to enter an agricultural or engineering course are admitted to the junior class without examination, provided their course has covered a sufficient amount of work in mathematics, physics, chemistry, and biology.

Special Recommendations.—A good preparation in algebra and geometry is most important for those who expect to enter engineering curricula.

The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing to take a major in Greek or Latin should devote especial attention to Greek and Latin composition, Roman history, and Latin pronunciation according to the Roman method.

Special Students.—Persons not candidates for a degree who wish to take special studies may be permitted to do so, if, upon examination,

they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, rather than for those who are incompetent to pursue a regular course. Candidates under twenty-one years of age will not be received as special students unless they have completed the regular requirements for admission.

No examinations are required for admission to the special and extension courses in Agriculture, or to the two years course in Household Economics, but admission to the latter presupposes the completion of a four years high school course.

The terms of admission to the College of Law are stated under the article on that college.

Admission by Examinations

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct examinations on the days appointed in June. If possible these examinations should be in charge of the Principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately, accompanied by the endorsement of the examiner. The examinations must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Registrar. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their school principals regarding their fitness to take the examinations and to undertake college work.

The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 17-22, 1913. All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than

one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission of Graduates from Class A Schools in Maine

Graduates of Maine high schools and academies placed by the State Superintendent of Schools in Class A may be admitted upon their school records, provided they have pursued a course of study approved by the State Superintendent as suitable for college preparation. If the high school record satisfies the specific requirements for the curriculum that they wish to pursue in the University, such candidates may have credit towards admission for any subject that has been credited toward their graduation. Unless the circumstances are exceptional, a candidate whose record does not fully meet the requirements will not be admitted under this plan.

The school record of the condidate must be certified by the Principal, upon blanks furnished by the University, and should be submitted before August 1st.

Admission by Certificate

Candidates from the other New England states who are graduates of schools approved by the New England College Entrance Certificate Board will be admitted upon certificate.

Certificates for admission will be accepted from such schools outside of New England as are admitted upon certificate at the leading colleges in their own states.

Certificates will not be accepted for non-graduates except in unusual cases, and then only provided the candidate is expressly recommended for admission by the Principal of the high school from which he comes. Certificates must be made out on blanks furnished by the University.

ENTRANCE REQUIREMENTS

To gain admission to any of the curricula leading to the degree of Bachelor of Arts or Bachelor of Science, 14 units must be offered by the candidates, according to the following schedules (to count one unit, a subject must be pursued for one school year, with five recitation periods, of at least 45 minutes each, a week):

For the Bachelor of Arts Curricula

Required Subjects

Foreign languages	4 units
English	3 "
History	1 unit
Mathematics	2½ units

(Not less than two units of any foreign language may be offered. Credit for advanced work will be accepted at the rate of one unit for each year of work.)

Optional Subjects (3 1-2 units to be chosen)

Each year of Greek	counts 1 unit
" " Latin	" 1 "
" " French	" 1 "
" " German	" 1 "
Advanced algebra	" ½ "
Trigonometry	" ½ "
Chemistry (including note-book)	" 1 "
Physics (including note-book)	" 1 "
Physiography (one-half year or one year)	counts ½ unit or 1 unit
Biology (including note-book)	counts 1 unit
Botany (including note-book)	" 1 "
Zoölogy (including note-book)	" 1 "
Physiology	" ½ "
Solid geometry	" ½ "
Roman history	" ½ "
Greek history	" ½ "
English history (1 year)	" 1 "
American history and civil government (1 year)	" 1 "
Mediæval and modern history	" 1 "

The requirement in history must include either a year of Greek and Roman history, a year of English, a year of Mediæval and Modern history, or a year of American history and civil government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

For the Bachelor of Science Curricula

Required Subjects

English	counts 3	units
* Algebra	" 1½	"
Plane geometry	" 1	unit
Solid geometry (College of Technology except Pharmacy)	" ½	"

Optional Subjects (8 or 8 1-2 units to be chosen)

(Of these, two years of one modern language, one year of science, and one year of history must be taken. Candidates entering a B. S. curriculum and offering four years of Latin may complete their entrance credits without a modern language, but must take at least four credits in modern language in college.)

Each year of French	counts 1	unit
" " German	" 1	"
" " Latin	" 1	"
" " Greek	" 1	"
Advanced algebra	" ½	"
Trigonometry	" ½	"
** Mechanical drawing (for technical courses)	counts ½	unit
** Manual training (for technical courses)	" ½	"
Chemistry (including note-book)	" 1	"
Physics (including note-book)	" 1	"
Physiography (one-half year or one year)	counts ½ unit or 1	unit
Biology (including note-book)	counts 1	unit
Botany (including note-book)	" 1	"
Zoölogy (including note-book)	" 1	"
Physiology	" ½	"
Roman history	" ½	"
Greek history	" ½	"
English history	counts ½ or 1	unit
American history and civil government	" ½ " 1	"

* Candidates who have had two full years of algebra, including a review during the last year, and the use of advanced text book may receive credit of two units. Such a course is recommended.

** Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing on the basis of one credit for five forty-five minute periods per week for one year in one subject taken in the high school.

Candidates for admission to the Bachelor of Science curricula who are well prepared in all the required subjects, but whose high-school course has included other subjects, instead of some of the electives mentioned above, will be allowed to substitute such of these as will furnish a real equivalent. Each case of such proposed substitution will be considered upon its merits.

Candidates for the two years CURRICULUM IN PHARMACY must be at least seventeen years of age, and must have successfully completed at least one year in an approved high school.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject:

Languages

ENGLISH.—The entrance examination in English presupposes courses in composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in composition particularly is of slow growth, and requires almost daily cultivation during a long period of time. Books, to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course such work in the elements of rhetoric, as for example, is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination on the B list of books will include incidentally questions on the syntax of sentences, and on general grammatical principles.

The grammatical sense is slowly acquired. Grammar, therefore, should be studied in the early grades and kept up from year to year and not formally introduced in some one grade, as the seventh or eighth.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Prospective candidates are advised to give especial

attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The candidate is not expected to have a detailed knowledge of these books, but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1912, the books are as follows: A Group I (two to be selected): Shakespeare's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night. Group II (one to be selected): Bacon's Essays; Bunyan's Pilgrim's Progress, Part I: The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography. Group III (one to be selected): Chaucer's Prologue; Spenser's Faerie Queen, (selections); Pope's The Rape of the Lock; Goldsmith's The Deserted Village; Palgrave's Golden Treasury, (First Series) Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns. Group IV (two to be selected): Goldsmith's Vicar of Wakefield; Scott's Ivanhoe, Quentin Durward; Hawthorne's House of Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens's Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna Doone. Group V (two to be selected): Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc, The English Mail Coach; Carlyle's Heroes and Hero Worship; Emerson's Essays (selected); Ruskin's Sesame and Lilies. Group VI (two to be selected): Coleridge's Ancient Mariner; Scott's Lady of the Lake; Byron's Mazeppa, The Prisoner of Chillon; Palgrave's Golden Treasury, (First Series) Book V, with especial attention to Wordsworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's Courtship of Miles Standish; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, and Pheidippides.

B. Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address, and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

The B list of books is for thorough study. The examination will be upon subject matter, form, and structure.

FRENCH.—The admission requirements in elementary and advanced French are those recommended by the Modern Language Association of America.

I. Elementary French.—At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; order of words in the sentence, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *le Roi des montagnes;* Bruno, *le Tour de la France;* Daudet, Easier Short Tales; De la Bédollière, *La Mère Michel et son chat;* Erckmann-Chatrian's Stories; Foa, *Contes biographiaues* and *le Petit Robinson de Paris;* Foncin, *le Pays de France;* Labiche and Martin, *la Poudre aux yeux* and *le Voyage de M. Perrichon;* Legouvé and Labiche, *la Cigale chez les fourmis;*

Malot, *Sans famille;* Mairet, *la Tâche du petit Pierre;* Mérimee, *Colomba;* Extracts from Michelet; Sarcey, *le Siège de Paris;* Verne's Stories.

II. Advanced French.—At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate proportions; writing from dictation.

Suitable texts are: About's Stories; Augier and Sandeau, *le Gendre de M. Poirier;* Béranger's Poems; Corneille, *le Cid* and *Horace;* Coppée's *Poems;* Daudet, *le Belle-Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's Letters; Hugo, *Hernani* and *la Chute;* Labiche's Plays; Loti, *Pêcheur d'Islande;* Mignet's Historical Writings; Molière, *l'Avare* and *le Bourgeois gentilhomme;* Racine, *Athalie, Andromaque,* and *Esther;* George Sand's Plays and Stories; Candeau, *Mademoiselle de la Seiglière;* Scribe's Plays; Thierry, *Récits;* Vigny, *la Canne de jonc;* Voltaire's Historical Writings.

At the end of the fourth year the pupil should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: Beaumarchais's *Barbier de Séville;* Corneille's Dramas; the elder Dumas's Prose writings; the younger Dumas, *la Question d'argent;* Hugo, *Ruy Blas,* Lyrics, and Prose Writings; La Fontaine's Fables; Lamartine, *Graziella;* Marivaux's Plays; Molière's Plays; Musset's Plays and Poems; Pellissier, *Mouvement littéraire au XIX siècle;* Renan, *Souvenirs d'enfance et de jeunesse;* Rousseau's Writings; Sainte-Beuve's Essays; Taine, *Origines de la France contemporaine;* Voltaire's Writings; Selections from Zola, Maupassant, and Balzac.

The examinations of the College Entrance Certificate Board in elementary French will be accepted for two units, and that in advanced French for one additional unit.

GERMAN.—The admission requirements in elementary and advanced German are those recommended by the Modern Language Association of America.

I. Elementary German.—The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar; that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjective, pronouns, weak verbs, and the more uusual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading leson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Anderson, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schwiegersohn;* Gerstäcker, *Germelshausen;* Heyse, *L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Siedel, *Märchen;* Stökl, *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;*

Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should predominate. A good selection of reading matter for the second year would be Anderson, *Märchen or Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year may be selected from such works as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Vergangenheit, Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué, *Undine;* Gerstäcker, *Irrfahrten;* Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnhelm;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen, Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterscher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for two units, and that in advanced German for one additional unit.

Latin.—The entrance examination in Latin will consist of four parts as follows:

1. An examination on the elements of Latin grammar and easy translations.

2. a. An examination in sight translation of Latin prose suited to test the ability of a candidate who has read from Cæsar (Gallic War and Civil War) and Nepos (Lives) an amount not less than Cæsar, Gallic War, I-IV.

b. Questions on the ordinary forms and constructions of Latin grammar and the translation of easy English sentences into Latin.

3. a. An examination on Cicero, speeches for the Manilian Law and for Archias, with questions on subject-matter, literary and historical allusions, and grammar.

b. An examination in sight translation of Latin prose adapted to candidates who have read from Cicero (speeches, letters, and De Senectute) and Sallust (Catiline and Jugurthine War) an amount not less than Cicero, speeches against Catiline I-IV, for the Manilian Law, and for Archias.

c. A test in writing simple Latin prose which shall demand a thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school.

4. a. An examination on Virgil, Æneid, I, II and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody.

b. An examination in sight translation of Latin poetry adapted to candidates who have read from Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia) an amount not less than Vergil, Æneid, I-VI.

A candidate may obtain separate credit for each part. Each represents a year's work and entrance credit for one unit.

In parts 2 and 3 candidates must deal satisfactorily with both the sight and set passages, or they will not be given credit for either.

Greek.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescibed.

History

Greek History.—History of Greece, to the capture of Corinth, 146 B. C. Myers, Morey, or Botsford.

Roman History.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

English History.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

United States History and Civil Government.—A knowledge such as may be obtained from the works of Fiske, Hart, Montgomery, or McLaughlin.

Mathematics

Algebra.—The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and least common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending on quadratic equations; the binomial theorem for positive integral exponents; the formulas for the nth term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils are required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Plane Geometry.—The usual theorems and constructions of good text books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions of good text books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique tri angles, and practical applications, including the solution of right spherical triangles.

Advanced Algebra.—Permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

Sciences

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoölogy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy; but in such cases it must be treated as an integral part of the subject under consideration.

* Chemistry.—The necessary ground is covered by the following textbooks; Brownlee and others, Hessler and Smith, McPherson and Henderson, Newell.

---

* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certificated in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

The requirements in botany and zoölogy are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the board. The note-book should include properly labelled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

---

* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises ar required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certified in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

ORGANIZATION OF THE UNIVERSITY

The University is divided for purposes of administration into the Colleges of Agriculture, Arts and Sciences, Law, and Technology, and the Maine Agricultural Experiment Station. The policies of the University as a unit are determined by the Board of Trustees and the General Faculty, but each division regulates those affairs which concern itself alone.

College of Agriculture

Curricula in **Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, Poultry Husbandry,** and **for Teachers of Agriculture.**

Two Years Course in Home Economics for Teachers; One Year Course in Agriculture for Teachers; School Course in Agriculture (two years).

Short Courses; Farmers' Week; Correspondence and Lecture Courses; Demonstration Work.

College of Arts and Sciences

Major subjects may be selected in **Biology, Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics,** and **Romance Languages.**

College of Law

This College is located in Bangor.

College of Technology

Curricula in **Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering,** and **Pharmacy,** and **Two Years Curriculum in Pharmacy.**

Maine Agricultural Experiment Station

Offices and principal laboratories in Orono; Highmoor Farm in Monmouth.

Graduate Courses leading to the Master's degree are offered by various departments.

Summer Term of six weeks.

GENERAL STATEMENT

The College of Agriculture, the College of Arts and Sciences, and the College of Technology offer four years curricula leading to the Bachelor's degree. The College of Law offers a three years curriculum leading to the Bachelor's degree.

The college year, except for the College of Law, is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for a semester in the College of Arts and Sciences is fourteen hours a week (exclusive of physical training and military science) leading to two and four-fifths credits. In the College of Agriculture and the College of Technology the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work not requiring preparation, counts as half time, unless otherwise specified. Such subjects are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

Except in the College of Law, the two years Pharmacy Curriculum, and the School Course in Agriculture, candidates for graduation are required to complete a four years curriculum of study by securing twenty-five or thirty credits, according to the college in which they are registered.

The College of Arts and Sciences has the following graduation requirements: (One year's work in college is equivalent to two years' work in preparatory school.)

1. Language Group.—This is composed of courses in language and literature, including all the courses offered in the departments of

English, German, and Romance Languages, and such courses offered by the departments of Greek and Latin as deal with the Greek and Latin languages and literatures, or presume some knowledge of these languages.

2. Science and Mathematics Group.—This is composed of the courses offered in mathematics and the biological and physical sciences, including all the courses offered by the departments of Mathematics, Biology, Chemistry, Biological Chemistry, and Physics.

3. Social Science Group.—This is composed of the courses offered in the departments of History, Economics and Sociology, Philosophy, Education, and Bibliography; and the courses in History, Archaeology, Fine Arts, and Biblical Literature offered in other departments and not included in the first group.

Every candidate for the Bachelor of Arts degree is required to complete the following amount of work in college: (a) eight hours prescribed in English; (b) ten or sixteen hours elected in group 1, of which six or ten hours must be in foreign language; (c) ten hours elected in group 2; (d) ten hours elected in group 3; (e) military science and tactics, two years, three hours a week; (f) physical training, one year, two hours a week.

A student who enters college with a minimum of four units credit in foreign language shall be required to elect sixteen hours in group 1, of which at least ten hours shall be in foreign language. A student who enters with more than the minimum of four units credit shall be required to elect at least ten hours in group 1, of which at least six hours shall be in foreign language.

4. Military Science and Tactics, two years, three hours a week.

5. Physical Training, one year, three hours a week.

The following courses are open to freshmen in the College of Arts and Sciences: Bibliography 1; Biology 1; Chemistry 1, 2, 3, 4, 14, 15; English 3, 4, 1a, 1b, 8a, 8b; German 1, 2; Greek 1, 2; History 1, 2, 3, 4, 6, 7; Latin 1, 2; Mathematics 2, 3, 1, 6, 19; Philosophy 5b; Physics 4, 5, 6; Romance Language 1, 2.

The College of Agriculture has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two or three years.

2. Mathematics, one year, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French or German), the equivalent of one-half year, five hours a week.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, three hours a week.

The College of Technology has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two years.

2. Mathematics, except in Chemistry and Chemical Engineering where one and two-fifths years are required, and Pharmacy where one year is required, two years, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French and German), the equivalent of one college year of each, five hours a week taken in college or preparatory school. Candidates offering one full year of the second language for admission must take the equivalent of a five hour year in that language in college. A student in German or French must receive at least two credits in the subject to count it toward a degree.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, three hours a week.

The science requirement in each college demands a year's work in some one science, and is not fulfilled by fractions of a year's work in two or more sciences. In making up the language requirement, work done in preapration for college may be counted, but two years' preparatory study will be reckoned as one year of college work.

Twenty-five credits (one credit is given for a recitation course that meets five hours a week, or for a laboratory course that meets at least ten hours a week, for one-half year) are required for graduation in the College of Arts and Sciences; thirty credits are required for graduation in the College of Technology, and the College of Agriculture.

The requirements for the College of Law are stated in connection with the description of that College.

COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

LEON STEPHEN MERRILL, M. D. *Director of Extension Work*
DEAN
LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry
FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science
PERCY ANDERSON CAMPBELL, M. S. A.
Professor of Animal Industry
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*
JOHN MANVERS BRISCOE, M. F. *Professor of Forestry*
GEORGE EDWARD SIMMONS, M. S. *Professor of Agronomy*
EDSON FORBES HITCHINGS, C. E., M. S.
Associate Professor of Horticulture
WILLIAM LEROY SLATE, JR. B. Sc. (Ag.)
Associate Professor of Agronomy
LAURA COMSTOCK *Associate Professor of Home Economics*
WILLIAM FREEMAN SCHOPPE, B. S.
Assistant Professor of Animal Industry
ALICE MIDDLETON BORING, PH. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
RALPH WOODBURY REDMAN, B. S.
Assistant Professor of Animal Industry
CORNELIA PALMER *Instructor in Home Economics*
HOWARD MADISON PARSHLEY, A. M. *Instructor in Zoölogy*
VICTOR GEORGE AUBRY, B. S. *Instructor in Animal Industry*
HARRY WOODBURY SMITH, B. S. *Instructor in Agriculture*
WILLIAM HINDS DARROW, M. A. *Instructor in Horticulture*
ARTHUR EDWARD STANFORD, B. S.
Itinerant Instructor in Farm Management

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agricultural Extension, Agronomy, Animal Industry, Biological and Agricultural Chemistry, Biology, Farm Management and Agricultural Engineering, Forestry, Home Economics, Horticulture, Veterinary Science and Bacteriology. The aim of the college is to train young men for service as farmers, teachers of agriculture and the allied sciences in schools and colleges, investigators in the agricultural experiment stations, and foresters; and to prepare young women to become teachers of home economics and to comprehend the problems of administration in the home and in public institutions. On entering either a four years curriculum or two years School Course in Agriculture a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the faculty of the college.

The courses of instruction are organized as follows

1. Regular Curricula
   - The four years general curricula in Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, and Poultry Husbandry, and the four years curriculum for Teachers in General Agriculture
   - The two years Teachers' Course in Home Economics
   - The one year Teachers' Course in Agriculture
   - The two years School Course in Agriculture
   - The short winter courses in General Agriculture, Animal Industry, Horticulture, and Poultry Management
   - Farmers' week
2. Extension Courses
   - The correspondence courses
   - The lecture courses
   - The traveling schools
   - The demonstration work
   - The coöperative experiments

THE COLLEGE CURRICULA

The college curricula are designed for those who wish to follow general farming, animal husbandry, dairy husbandry, poultry husbandry, horticulture, home economics, chemistry as related to experiment sta-

tion work, biological chemistry, bacteriology and veterinary science, biology, farm management, and forestry either as a business or as a profession.

Certain studies are fundamental to all work in agricultural lines. As many as possible of these studies are offered in the first two years, during which time the student is necessarily given no choice of subjects. By the beginning of the junior year each student must decide whether he is to specialize in Agronomy, Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Horticulture, or Biology. To specialize in any one of these lines, he must during his junior and senior years take the studies given in the schedules which follow.

Students in agriculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. Those intending to take this course must elect a preparatory course in quantitative chemical analysis.

One of the following curricula, embracing 150 college hours each, is required for the students taking the four years curricula in agriculture. It is recommended that the subjects be taken in the order here given. The elective subjects are selected with the advice of the major instructor.

Curriculum for the First Two Years for All Students Taking Four Years Curricula in Agriculture

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5	3	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 10, *6	2	Chemistry 4, †4	2
English 3	2	English 4	2
Military 1, *3	1	Forestry 1	2
Modern Language	3	Military 2, *3	1
Physical Training *2	½	Modern Language	2
	20½	Physical Training *2	1
			21

SOPHOMORE YEAR

Agronomy 1	2	Chemistry 6	5
Agronomy 2, *3	1	English 1b	1
Animal Industry 3	2	Farm Management 4	2
Animal Industry 4, †2	1	Horticulture 1	4
English 1a	1	Mathematics 1	3
Horticulture 2	3	Mathematics 3	2
Mathematics 2	5	Military 2, *3	1
Military 1, *3	1	Poultry Husbandry 6	2
Poultry Husbandry 1	1	Poultry Husbandry 6a, †2	1
Poultry Husbandry 1a, †2	1		
Principles of Breeding (Bl 18)	2		21
	20		

Curriculum for Students Specializing in Agronomy

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3, †4	2	Agricultural Chemistry 3	2
Agronomy 6, †4	2	Agronomy 7, †2	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 10	4	Biological Chemistry 2, †6	3
English 17	2	Biology 11	4
Horticulture 3	3	English 14	2
	18	Veterinary Science 6	3
		Veterinary Science 8	1
			19

SENIOR YEAR

Agronomy 4	2	Agronomy 9, †2	1
Animal Industry 6, †2	1	Animal Industry 5	2
Animal Industry 7	2	Animal Industry 8, *3	1
Bacteriology 3, †6	3	Biology 8	4
Farm Management 2	3	Farm Management 1	3
Thesis	3	Farm Management 5	3
Elective	2	Thesis	3
	16		17

Curriculum for Students Specializing in Animal Industry

Animal and Dairy Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 6, †2	1	Agricultural Chemistry 3	2
Animal Industry 7	2	Animal Industry 5	2
*Bacteriology 2	1	Animal Industry 8, *3	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 2	4	Biological Chemistry 2, †6	3
English 17	2	Biology 6	4
Farm Management 2	3	Veterinary Science 6	3
		Veterinary Science 8	1
	17 or 18		19

SENIOR YEAR

Agronomy 4	2	Animal Industry 12, †2	1
Animal Industry 9,	2		3
	4	Animal Industry 11,	2
Veterinary Science 9	2	or	
or		*Bacteriology 4	2
*Animal Industry 13	2	Biology 8	4
	4	English 14	2
*Animal Industry 14, †4	2	Farm Management 5	3
Animal Industry 10	3	Thesis	3
Bacteriology 3, †6	3		
Veterinary Science 7	2		14 or 15
Veterinary Science 8	1		
Thesis	3		
	18		

*Note—Students desiring to follow Animal Husbandry should elect Animal Industry 9, 11, 12, and Veterinary Science 9; those following Dairy Husbandry should elect Bacteriology 2 and 4, and Animal Industry 13 and 14.

Poultry Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 6, †2	1	Agricultural Chemistry 3	2
Animal Industry 7	2	Animal Industry 5	2
Bacteriology 2	1	Animal Industry 8, *3	1
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 2	4	Biological Chemistry 2, †6	3
English 17	2	Biology 6	4
Poultry Husbandry 2	1	English 14	2
Poultry Husbandry 2a, †2	1	Poultry Husbandry 4	2
	17		19

SENIOR YEAR

Agronomy 4	2	Biology 8	4
Farm Management 2	3	Farm Management 5	3
Horticulture 4	3	Poultry Husbandry 9	2
Poultry Husbandry 10	2	Poultry Husbandry 9a, †2	1
Poultry Husbandry 10a, †2	1	Veterinary Science 5	2
Poultry Husbandry 5, 2		Thesis	3
or	2	Electives	1
Elective 2			16
Thesis	3		
	16		

Curriculum for Students Specializing in Horticulture

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Agricultural Chemistry 3	2
Biology 10	4	Animal Industry 5	2
English 17	2	Bacteriology 1, †6	3
Horticulture 3	3	Biological Chemistry 2, †6	3
Horticulture 4	3	Biology 11	4
Electives	2	English 14	2
	19	Horticulture 7	2
			18

SENIOR YEAR

Agronomy 4	2	Animal Industry 8, *3	1
Animal Industry 6, †2	1	Biology 8	4
Animal Industry 7	2	Horticulture 5	3
Farm Management 2	3	Horticulture 6	3
Horticulture 8	3	Thesis	3
Thesis	3		14
Elective	3		
	17		

Curriculum for Students Taking Major Work in Biology

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Animal Embryology 6	4
English 17	2	Biological Chemistry 2, †6	3
Modern Language	3	English 2b	1
Plant Histology 10	4	Modern Language	3
Vertebrate Zoölogy 2	4	*Plant Pathology 16 or Elective	3
	18	Plant Physiology 11	4
			18

SENIOR YEAR

Animal Histology 3	4	Animal Physiology 5	5
Advanced Zoölogy or Botany	3	Bacteriology 1, †6	3
Bacteriology 2	1	Entomology 8	4
Geology 5	3	*Plant Pathology 16 or Elective	3
Thesis	3	Thesis	3
Elective	3½		18
	17½		

*Given in alternate years.

Curriculum in Agriculture for Those Who Intend to Become Teachers of this Subject in the Public Schools

This curriculum is offered in response to a call for men capable of teaching all branches of elementary agriculture in high schools or academies. In order to receive a degree, 150 college hours, or 30 credits, must be completed.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 5	3	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 10, *6	2	Chemistry 4, †4	2
English 3	2	English 4	2
Military 1, *3	1	Forestry 1	2
Modern Language	3	Military 2, *3	1
Physical Training *2	½	Modern Language	2
		Physical Training *2	1
	20½		21

SOPHOMORE YEAR

Animal Industry 3	2	Education 2	3
Animal Industry 4, †2	1	English 1b	1
Education 1	3	Horticulture 1	4
English 1a	1	Mathematics 1	3
Horticulture 2	3	Mathematics 3	2
Mathematics 2	5	Mech. Engineering 2, *4	1
Mech. Engineering 1b, *4	1½	Military 2, *3	1
Military 1, *3	1	Poultry Husbandry 6	2
Poultry Husbandry 1	1	Poultry Husbandry 6a, †2	1
Poultry Husbandry 1a, †2	1		
	19½		18

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 1	2	Agronomy 10, *3	1
Agronomy 2, *3	1	Chemistry 6	5
Biology 15	3	Education 8	2
Education 5	3	English 14	2
English 17	2	Modern Language	2
Geology 5	3	Veterinary Science 6	3
Horticulture 3	3	Veterinary Science 8	1
Modern Language	3	Elective	1
	20		17

SENIOR YEAR

Agronomy 4	2	Animal Industry 5	2
Animal Industry 7	2	Animal Industry 8, *3	1
Biological Chemistry 1	5	Agricultural Chemistry 3	2
Horticulture 4	3	Bacteriology 1, †6	3
Physics 4	5	Biology 8	4
Veterinary Science 7	2	Physics 5, *5	2
Veterinary Science 8	1		14
	20		

The Forestry Curriculum

A complete undergraduate curriculum is arranged which will serve as the basis not only for practical work in forestry, but also for a liberal education. During the first two years much attention is given to biology and civil engineering, both of which are important fundamental subjects upon which are built the more technical forestry courses. A knowledge of the principles of forestry in its different branches is gained by the student, and considerable practical work is done in the forest. The woodlands belonging to the University, together with adjacent lands covered by young forest, furnish a field for the study of many forest problems. Field trips are made and demonstration thinnings and plantations made at various places throughout the State.

The instruction in this department consists of lectures, recitations, laboratory, and field work; the latter consuming a considerable portion of the scheduled time during the junior and senior years.

There are good openings for students to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying the expense of their university course.

Besides the prescribed work in other departments, courses 4 to 14 inclusive are required of all students majoring in Forestry, and courses 3 and 15 are recommended as electives for these students. Course 1 is open to all students, but is not required of students majoring in Forestry.

At graduation the student receives the degree of Bachelor of Science in Forestry. A special bulletin, giving detailed descriptions of all the courses as well as of the equipment, is issued by the department and will be sent free to any address upon request.

Curriculum in Forestry

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3 †4	2	Chemistry 4, †4	2
Drawing 1 *6	2	Drawing 2, *6	2
English 3	2	English 4	2
Mathematics 2	5	Mathematics 1	3
Military *3	1	Mathematics 3	2
Physical Training	½	Military *3	1
	19½	Physical Training	1
			21

SOPHOMORE YEAR

Agronomy 1	2	Biology 17	4
Agronomy 2	1	Biology 8	4
Biology 17	4	Civil Engineering 2b, 2c	1½
Civil Engineering 1a, 2a	2½	English 1b	1
English 1a	1	English 2b	1
English 2a	2	Horticulture 1	4
History 6	3	Military	1
Military	1	Modern Language	2
Modern Language	3		
	19½		18½

JUNIOR YEAR

Biology 10	4	Biology 11 or 16	4 or 3
Civil Engineering 4b, 4c	2	Civil Engineering 9a	1
Geology 5	3	Civil Engineering 9b	2
Forestry 10	2	Forestry 11	2
Horticulture 8	3	Modern Language	2
Modern Language	3	Physics 6	2
	17	Electives	4
			16 or 17

SENIOR YEAR

Biology 18	2	Biology 11 or 16	4 or 3
Economics 1a	2	Economics 6	3
Forestry 12	5	Forestry 7	2
Forestry 6	2	Forestry 9, *6	2
Forestry 8, *6	2	Forestry 13	1
Forestry 4	2	Forestry 15	1
History 5	2	History 2	3
	17	Thesis	5
			23 or 21

Four Years Curriculum in Home Economics

This curriculum, leading to a Bachelor of Science degree, prepares women to teach Home Economics in elementary, high and normal schools, and in colleges. It gives instruction in cookery, dietetics, marketing, serving, household economics, laundering, sewing, and handwork. A foundation for the practical work is laid in pursuing a thorough course in biology, chemistry, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this curriculum must meet the regular college requirements.

Laboratory fees, to cover the cost of materials used, are as follows: Cookery courses 1, 2, 7, 8, each $6 a semester. Cookery courses 3, 4, each $2.50 a semester. Cookery courses 5, 6, each $6 a semester. Handwork courses $1 a semester. Household economics 50c. a semester. Laundering $1 a semester. Practical housework $3.50 a semester.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3 †4	2	Chemistry 4, †4	2
English 3	2	English 4	2
Home Economics 1	4	Home Economics 2	4
Modern Language	3	Modern Language	2
	18		18

SOPHOMORE YEAR

Bacteriology 2	1	Chemistry 6	5
English 1a	1	English 1b	1
English 2a	2	English 2b	1
Home Economics 9 †4	2	Home Economics 10 †4	2
Home Economics 12 †4	2	Home Economics 13 †4	2
Home Economics 15	2½	Home Economics 16	2½
Mathematics 2	5	Home Economics 20	2
Modern Language	3	Modern Language	2
	18½		17½

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Biology 19	2
Home Economics 3	3	Biological Chemistry 2 †4	2
Home Economics 17	2	Home Economics 4	3
Home Economics 19	1½	Home Economics 18	2
Philosophy 1a	3	Philosophy 1b	3
Physics 4	5	Physics 5	2
	19½	Electives	4
			18

SENIOR YEAR

Economics 1a	2	Education 2	3
Education 1	3	Education 8	2
Education 5	3	Home Economics 6	1½
Home Economics 5	2½	Home Economics 14 †4	2
Home Economics 11 †4	2	Home Economics 22	1
Home Economics 21	2	Home Economics 23	1
Home Economics 24	1	Home Economics 26	3
* Home Economics 25	2	Philosophy 4	2
Horticulture 8	3	Electives	2½
Mech. Engineering 20	1		18
	21½		

* Either fall or spring semester.

Two Years Course in Home Economics

This course aims to prepare women for teachers in Home Economics. It is offered to those who find it impossible to remain at the University for a longer period. This course does not lead to a degree but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent, and who have some practical knowledge of housework, are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the University, courses in elementary chemistry, physics, and physiology. For information concerning fees, see the four years curriculum.

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 3	2	English 4	2
Home Economics 1	4	Home Economics 2	4
Home Economics 9	2	Home Economics 10	2
Home Economics 15	2½	Home Economics 16	2½
	19½		20½

SECOND YEAR

Biological Chemistry 1	5	Biological Chemistry 2, †4	2
Education 1	3	Biology 19	2
Home Economics 7	3	Education 2	3
Home Economics 12	2	Home Economics 6	1½
Home Economics 17	2	Home Economics 8	3
Home Economics 19	1½	Home Economics 13	2
Home Economics 24	1	Home Economics 18	2
Home Economics 25	2	Home Economics 20	2
Mechanical Engineering 20	1	Home Economics 21	2
		Home Economics 22	1
	20½		20½

Special Courses in Agriculture and Home Economics

The Special Courses in Agriculture and Home Economics are designed for young men and women who cannot well spend four years in preparation, but who desire to secure special training in this line. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, farm management, general agriculture, or home economics.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course. If they subsequently desire to become candidates for a degree, they will be required to meet all the entrance requirements.

The annual expenses for courses of one year or more are the same as those for students in the four years courses. Tuition is free except in Forestry and Home Economics.

Two Years School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultrymen or gardeners, but who cannot devote time to high school or college training.

The same equipment is used as in the four years curricula, but the work is of a more elementary nature. All the classes are separate and distinct from the four years classes, and in no case will college credit be allowed for work done in the school course.

There are no entrance examinations required of those who desire to enter the school course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course, but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work either at the college, or on some farm approved by the Faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester		*Spring Semester*	
Animal Industry	3	Animal Industry and Dairy Work	3
Business Arithmetic and Farm Accounts	2	English	3
Carpentry	*3	Farm Botany	2
English	3	Forge Work	*3
Farm Crops	3	Fruit Growing	3
Farm Crops Laboratory	*3	Orchard Practice and Laboratory Work	*3
Fruit Handling	3	Poultry Husbandry	2
Fruit Picking, Packing, and Laboratory Work	*3	Poultry Husbandry Laboratory	†2
Poultry Husbandry	2	Practical Dairying and Stock Management	*3
Poultry Husbandry Laboratory	†2	Soils and Fertilizers	3
Practical Dairying and Stock Management	†2	Soils Laboratory	*3

SECOND YEAR

Animal Industry	3	Veterinary Science	3
English	2	Animal Industry	3
Farm Chemistry	3	English	2
Farm Crops	2	Farm Management	3
Farm Engineering and Mechanics	1	Farm Management Laboratory	*3
Farm Engineering and Mechanics Laboratory	*3	Forestry	2
Poultry	2	Insects	2
Practical Dairying and Stock Management	†2	Poultry Management	2
Vegetable Gardening	3	Practical Dairying and Stock Management	†2
Vegetable Gardening Laboratory	*3	Small Fruit Culture and Plant Propagation	3
		Small Fruit Culture and Plant Propagation Laboratory	*3

Short Courses in General Agriculture, Dairying, Horticulture, and Poultry Management

The short course in general agriculture deals especially with farm crops. Special attention is given to the potato, corn, oat, and hay crops,—the preparation of the seed bed, selection of seed, seeding, fertilization, culture, and harvesting. Such general subjects as drainage, maintenance of soil fertility, rotation of crops, control of weeds, etc., are considered. Potato, corn, and small grain judging is made a prominent feature.

The short course in dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen, and others who desire to learn milk testing, butter making, the principles of animal nutrition and practices of feeding, breeding, judging stock, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and coöperation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort is made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish to gain a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring, judging, killing, and marketing. Supplementing the work of the regular instructors some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of instruction the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent upon application to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one session is given up to problems of rural betterment. A section is arranged where home economics for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

Department of Agricultural Extension

This department of the College of Agriculture offers correspondence courses, lecture courses, demonstration work, coöperative experiments, and extension schools in agriculture.

This work is intended to give direct help to those on the farm and in the home; to aid those who desire definite instruction in practical agriculture, animal and dairy husbandry, poultry husbandry, home economics, forestry, and horticulture. It supplements the teaching and experimenting of the College of Agriculture and the Experiment Station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the College or procured from the U. S. Department of Agriculture, or from the various Experiment Stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1—Farm Crops and Crop Production

Course 2—Farm Management

Course 3—Feeding and Breeding of Farm Animals and Dairying

Course 4—Poultry Keeping

Course 5—Fruit Growing

Course 6—Forestry

Course 8—Elementary Agriculture

Course 9—Home Economics

Course 10—Vegetable Gardening

Course 11—The Business of Dairying

Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Demonstration Work

For this work members of the agricultural faculty will make demonstrations, showing, as well as telling, how to solve many practical farm problems. These demonstrations are made on the farms and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing (use of Babcock

tester); stock judging; corn and small grain judging and breeding; potato judging, breeding, and spraying; orchard spraying, pruning, and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Cooperative Experiments

Experiments will be undertaken in coöperation with farmers along such lines as the following: the determination of fertilizing problems; the eradication of noxious weeds; the determination of the best means for increasing the hay crop. To encourage systematic seed improvement the college will each year distribute a large amount of improved seeds of various kinds among such farmers of the State as will undertake to carry on careful experiments and to make reports of the results obtained at the close of each season.

Experiments with corn, oats, alfalfa, fertilizers, and pastures have been carried on in nearly every country in the State.

During Farmers' Week exhibits are made showing the results of this experimental work. School gardening is encouraged by the distribution of seeds.

Extension Schools in Agriculture

To extend the advantages of agricultural instruction to persons actively engaged in agriculture, the Extension department will conduct a limited number of Three or Six Day Schools in various parts of the State. Members of the agricultural faculty will teach in these schools.

Correspondence

Besides the Demonstration, Correspondence, and Lecture courses, the College of Agriculture welcomes correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

A free monthly publication, "Timely Helps for Farmers," treating of subjects of interest to farmers, is published by the Extension Department and may be secured upon application.

Circulars giving full information upon these subjects will be sent upon request.

DEPARTMENTS OF INSTRUCTION

NOTE.—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation.

AGRONOMY

PROFESSOR SIMMONS; ASSOCIATE PROFESSOR SLATE

1. SOILS.—Lectures and recitations on the origin, types, physical properties, moisture content, and distribution of soils, and their relation to crop production. The fundamental principles underlying soil management for soil conservation and improvement will be studied. *Two hours a week.* Fall semester.

2. SOILS.—A laboratory course accompanying Course 1 dealing with the soil from the physical standpoint. Some field work is given for the purpose of correlating the laboratory exercises with actual field operations. * *Three hours a week.* Fall semester.

3. FIELD CROPS.—A laboratory course in seed and grain identification, selection, judging, testing, and commercial grading. † *Four hours a week.* Fall semester.

4. MANURES AND FERTILIZERS.—A lecture course dealing with barnyard manure, commercial fertilizers, green manures, and soil amendments. *Two hours a week.* Fall semester.

5. FIELD CROPS.—A study of the most important cereals, their history, adaptation, distribution, culture, and uses, with special reference

to New England conditions. The potato is included in this course. Lecture, *two hours a week;* laboratory, † *two hours a week.* Fall semester.

6. Field Crops—Grasses and Forage Crops.—Lectures and laboratory work dealing with the grasses, forage plants, and roots. A study of the hay crop and markets, soiling systems, and special forage crops. Prerequisite, Agronomy 5. † *Four hours a week.* Fall semester.

7. Field Crops—Crop Improvement.—A study of the principles and methods involved in field crop improvement. The work of experiment stations in this country and abroad is reviewed. Prerequisites, Agronomy 3, 5 and 6. † *Two hours a week.* Spring semester.

9. Field Crops—Special.—A course dealing with crops not covered in Agronomy 5 and 6. Prerequisite, Agronomy 5. † *Two hours a week.* Spring semester.

10. School Gardening.—This course is especially designed for those taking the four years teachers' course in agriculture. It will deal with the use of the school garden as a supplement to the teaching of agriculture in secondary schools; the material that should be found therein, and the use of this material for laboratory purposes; the laying out of the school garden, and its general management. * *Three hours a week.* Spring semester.

11. Thesis.—Those specializing in Agronomy will be required to prepare a thesis on some line of this work, the subject of the thesis to be chosen by the student under the direction of the head of the department. The subject for this study should be chosen and definite assignment made before the close of the junior year. Six hours minimum credit. *Three hours* fall semester and *three hours* spring semester of the senior year.

ANIMAL INDUSTRY

Professor Campbell; Assistant Professor Schoppe; Assistant Professor Redman; Mr. Aubry

Animal and Dairy Husbandry

1. Animal Breeding.—A study of the market and breed types of dairy cattle, beef cattle, and sheep; their history, development, breed

characteristics and economic values. The work is given by lectures and text-books. *Two hours a week.* Spring semester.

2. Live Stock Judging.—Practice in the use of score cards and judging, handling, and management of dairy cattle, beef cattle, and sheep. This course is taken in conjunction with Course 1. † *Two hours a week.* Spring semester.

3. Animal Breeding.—A study of the market and breed types of swine and horses; their history, development, breed characteristics, and economic values. Lectures and recitations on the principles of breeding. *Two hours a week.* Fall semester.

4. Live Stock Judging.—Practice in the use of score cards, and judging, handling, and management of swine and horses. This course is taken in conjunction with Course 3. † *Two hours a week.* Fall semester.

5. Animal Feeding.—Food requirements for different kinds of animals; composition of foods and the nutrients furnished by them; feeding formulas; calculating rations; valuation of foods; pasturing, soiling, and methods of feeding. *Two hours a week.* Spring semester.

6. Dairying.—A study of the Babcock test; use of lactometer; determination of acidity and adulterations. Given by lectures, text-books, and practice in dairy laboratory. † *Two hours a week.* Fall semester.

7. Dairying.—Lectures and recitations upon the composition and formation of milk; its production and aeration, pasteurization, separation, manufacture into butter, and marketing. *Two hours a week.* Fall semester.

8. Laboratory Dairying.—Practice in handling and testing milk and cream for butter fat, acidity, and solids; ripening cream; making butter, and operating dairy machinery. This must be in conjunction with or preceded by Courses 6 and 7. * *Three hours a week.* Spring semester.

9. Advanced Animal Feeding.—This course is devoted to the methods and practices of successful feeders in the production of milk, and meat, and the rearing of horses. Elective for those who have completed Course 5. *Two hours a week.* Fall semester.

10. Advanced Dairying.—This course is provided for those who desire to follow some line of dairying. It will deal with such problems as handling of milk for city trade, milk inspection, certified milk plants, manufacture and sale of ice-cream, and those problems pertaining to the creamery. Courses 6, 7, and 8 are prerequisites for this course. *Three hours a week.* Fall semester.

11. Advanced Animal Breeding.—Lectures upon the formation of flocks, herds, etc.; a study of pedigrees, records, and the practices of successful breeders. Elective for those who have completed Courses 1 to 4 inclusive. *Two hours a week.* Spring semester.

12. Advanced Stock Judging and Management.—This course is intended for those who desire more practice in judging than is given in Courses 2 and 4; also actual experience in preparation of stock for the show ring and market. † *Two hours a week.* Spring semester.

13. Cheese Making.—Lectures and recitations upon the manufacture and curing of Cheddar and other brands of cheese. Elective for those who have completed Courses 6, 7, and 8. *Two hours a week.* Fall semester.

14. Cheese Making.—Practice in the laboratory. Taken in conjunction with Course 13. † *Four hours a week.* Fall semester.

15. Thesis.—Students specializing in Animal Industry are required to prepare a thesis on some subject approved by the head of the department. *Three hours* fall semester and *three hours* spring semester.

Poultry Husbandry

Courses 1, 1a, 6, and 6a, are required of all agricultural students. Courses 2, 2a, 4, 8, 9, ca, and 10a are required of all students specializing in Poultry Husbandry. Course 5 is required only of students who intend to become teachers of, or Experiment Station workers in, poultry husbandry.

1. Poultry Breeds and Management.—A general consideration of the present status of poultry keeping in America. A study of the types and breeds of market poultry, including ducks, geese, and turkeys. *One hour a week.* Fall semester.

1a. Laboratory Practice.—The judging of the breeds of poultry, mainly from the utility standpoint; the selection of breeding stock. To be taken with Course 1. † *Two hours a week.* Fall semester.

2. Commercial Poultry Keeping.—Considered as a business, as an investment, as an employment. A consideration of the large successful poultry farms and how they are operated. *One hour a week.* Fall semester.

2a. Laboratory Practice.—The planning and laying out of poultry plants, houses, and fixtures suitable for specialization on a large scale. To be taken with Course 2. † *Two hours a week.* Fall semester.

4. Markets and Marketing.—A consideration of the requirements of the best markets for poultry produce in America, possible improvements, the commission business, cold storage, coöperation. *Two hours a week.* Spring semester.

5. Poultry Literature.—An advanced course in the study of bulletins and reports of the experiment stations in this and other countries, with especial attention to the work of the Maine Experiment Station, poultry papers, and text books. *Two hours a week.* Fall semester.

6. Poultry Management.—A continuation of Course 1. A study of feeds and feeding, egg production, incubation, brooding, housing, rearing and feeding of young stock, and poultry fattening. *Two hours a week.* Spring semester.

6a. Laboratory Practice.—The drawing of plans of houses and appliances suitable for work on the farm; practice in the mixing of feeds; the examination of incubators and brooders; the killing and dressing of poultry; the handling of eggs for market. To be taken with Course 6. † *Two hours a week.* Spring semester.

9. Incubation.—Natural and artificial; history of artificial, Chinese, and Egyptian methods; modern methods; the principles; the application. *Two hours a week.* Spring semester.

9a. Laboratory Practice.—The selection of eggs to set; the operation of incubators; the setting of hens and other work intimately connected with the operation of incubators and brooders. † *Two hours a week.* Spring semester.

10. Breeds and Breeding.—A study of the types and breeds of market and fancy poultry; their history, development and breed characteristics; mating; the application of the principles of breeding to both fancy and utility poultry. *Two hours a week.* Fall semester.

10a. Laboratory Practice.—The judging and scoring of the various breeds and varieties of poultry; the selection, washing, and fitting of birds for exhibition. To be taken with Course 10. † *Two hours a week.* Fall semester.

11. Thesis.—Original work on some subject chosen by the student under the direction of the head of the department.

BACTERIOLOGY AND VETERINARY SCIENCE

Professor Russell; Mr. Smith

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. This course may be taken alone or in connection with Course 2. † *Six hours a week.* Spring semester.

2. Bacteriology.—A lecture course open to all students. It should be elected by students taking Course 1 as well as by students who cannot take a laboratory course. Subjects considered will include history of bacteriology; classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products; the relation of bacteria to health and disease; immunity. *One hour a week.* Fall semester.

3. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogenic bacteria. Course 1 is a prerequisite. † *Six hours a week.* Fall semester.

4. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

5. Veterinary Science.—This course deals with the anatomy, physiology, and diseases of poultry. *Two hours a week.* Spring semester.

6. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals and their treatment to preserve and restore health. *Three hours a week.* Spring semester.

7. Veterinary Science.—A continuation of Course 6. *Two hours a week.* Fall semester.

8. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.* Fall and spring semester.

9. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.* Fall semester.

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Merrill; Mr. Smith

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source, nature, and assimilation of plant food; the composition of the animal body and of food materials; the adaptation of food to the animal requirements; the chemical changes involved in the digestion and assimilation of foods; respiration; absorption and liberation of energy; general metabolism; the chemical processes and methods of investigation by which these subjects are studied. *Five hours a week.* Fall semester.

2. Laboratory Biological Chemistry.—A study of the carbohydrates, fats, and protein bodies; the digestive enzymes; the blood, muscle, bones, and other tissues of the body; milk, bile, and other secretions. A continuation of the preceding course. † *Six hours a week.* Spring semester.

3. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; the fixation of atmospheric nitrogen; the chemistry of milk and other dairy products. Open to students who have completed Course 1. *Two hours a week.* Spring semester.

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter, and other dairy products. The course is designed for students desiring to take up experiment station and inspection work. Open to students who have completed the courses, Chemistry 1, 2, 3, 4, 7, 8, 14, 15, and 16. † *Ten hours a week.* Spring semester.

5. Geology.—A study of the earth's history and development, with especial attention to dynamical, structural, and physiographical geology. *Three hours a week.* Fall semester.

6. Economic Geology.—A course in applied geology, including a general survey of our mineral resources, with special reference to the mineral fuels; the distribution and manner of occurrence of the more useful metals; the economically important non-metallic minerals; and a study of the rocks and their uses as building stone, as road material, and as sources of lime and cement. *Two hours a week.* Fall semester.

BIOLOGY

The courses in this department are described under the College of Arts and Sciences.

FARM MANAGEMENT AND AGRICULTURAL ENGINEERING

Professor Simmons; Associate Professor Slate; Mr. Smith

1. Farm Management.—A study of the various types of farming, with comparison of investment and returns for each. A study will be made of the conditions under which extensive, intensive, and mixed systems of farming prosper or fail; laying out of fields and rotation of crops; investigation of cost of different farming operations; management of men and teams; markets and marketing. Farm surveys with a detailed study of the conditions on different farms will be made. Farm plans will be outlined to suit various conditions. *Two hours lecture and * three hours laboratory a week.* Spring semester.

2. Agricultural Engineering and Rural Architecture.—(a) *Agricultural Engineering.* Farm surveying and leveling; the plotting of

farms and the measurement of land; a study of drainage; estimating the investment and returns from a system of drainage; the making of roads; road material.

(b) *Rural Architecture.* The planning, designing, location, and construction of farm buildings, water systems, sewerage, concrete construction. *Two hours lecture and *three hours laboratory a week.* Fall semester.

3. History and Economics of Agriculture.—(a) *History of Agriculture.* A history of agriculture from early times to the present day; the beginning of British agriculture, and the development of modern agriculture; the agriculture of the United States, its influence on social conditions; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the evolution of farm machinery; progress in agricultural education. Lectures supplemented by illustrative material and lantern slides.

(b) *Economics.* The factors of agricultural production, and their economic properties; organization of the farm; rent of farm land; the law of diminishing returns from the land; system of distribution; coöperative organizations; a study of life in the rural communities; schools and other rural organizations. *Two hours lecture and †two hours laboratory a week.* Fall semester.

4. Farm Accounting.—(a) *Farm Mathematics.* Instruction in this subject consists in the application of its principles to all kinds of farm problems where measurements of material, extension, capacity, etc., are required.

(b) *Farm Records and Accounts.* A system of records of the various operations of the farm, such as records of field labor, milk production in the dairy, crop yields, etc.; a system of accounts showing the receipts and expenditures on the farm. *Two hours lecture a week.* Spring semester.

5. Farm Mechanics and Farm Machinery.—(a) *Farm Mechanics.* A study of the simpler laws of mechanics as applied to farm implements and farm machinery.

(b) *Farm Machinery.* A study of machinery used on the farm, farm power, etc. Demonstrations and tests are made with various machines and implements. *Two hours lecture and *three hours laboratory a week.* Spring semester.

FORESTRY

Professor Briscoe

The courses in Forest Botany and Forest Zoölogy are listed under Biology.

1. General Forestry.—The importance and scope of the subject; forest as a soil-former and soil-improver; relation of forest to health of a community; relation to the state; esthetic value; influence on floods; importance of forest in irrigation; geographical distribution of forests. Open to all students. *Two hours a week.* Spring semester.

3. Forest Mapping and Computing.—Making type and topographical maps using data of valuation surveys; practical work in computing aneroid readings for altitude; timber estimates from valuation surveys. Elective for seniors. *Time to be arranged.* Spring semester.

4. Forest History.—The rise and development of forestry in European countries, the United States, and other countries. The text-book is History of Forestry, by B. E. Fernow. *Two hours a week.* First half of fall semester.

6. Silviculture.—A study of the facts which concern forest growth in the relation of the tree to external influences; characteristics of the forest, and of the forest regions of the United States; systems of reproducing forests naturally, thinnings and improvement cuttings. To be taken in connection with Course 8. Open to those who have taken Biology 10, 11 and 17. *Two hours a week.* Fall semester.

7. Silviculture.—A continuation of course 6. To be taken in connection with course 9. *Two hours a week.* Spring semester.

8. Silviculture Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 to 2000 acres of forest land in the vicinity of the University. A report accompanies the map describing the condition of the tract and type of forest growth. Open to students in Forestry who have had Drawing 1 and 2. **Six hours a week.* Fall semester.

9. Silviculture Field Work.—A continuation of course 8. It includes practice in thinning and work in planting; practical test of

germinating quality of tree seeds and a study of seedlings. The student is required to make a planting plan for about 100 acres of land and prepare a map of the tract. This course should be preceded by courses 6 and 7. **Six hours a week.* Spring semester.

10. Forest Measurements.—Practical instruction in the woods and in the office. Some recitations.

(1) *Woods Work.*—The use of various hypsometers in ascertaining the height of standing trees; determining the contents of felled and standing trees and the volume of stands; study and use of American log scales; consideration of the methods of measurement used in the United States; study of the rate of growth of trees in diameter, height, and volume.

(2) *Office Work.*—Computing the data obtained in the woods; calculating the contents of logs in cubic feet, and the contents of trees and stands in cubic feet, cords and board feet; use of graphic methods in determining the average rate of growth in diameter, height, and volume; construction of tables of rate of growth, volume, and yield. **Six hours a week.* Fall semester.

11. Forest Measurements.—A continuation of course 10. **Six hours a week.* First half of spring semester.

12. Lumbering.—The industry considered from an economic standpoint; an account of the methods of lumbering in the different parts of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and prepare a written report on the operations of lumbering in that locality. Two-fifths credit is allowed for the time spent in the lumber camp and in preparing the report. Open to students taking Forestry as a major subject. *Two hours a week.* First half of fall semester.

13. Forest Management.—Financial and economic considerations; the normal forest; principles and preparation of working plans. Open to those who have taken Courses 6, 7, 8 9, 10, and 11. *Two hours a week.* First half of spring semester.

14. Forest Policy and Regulation.—The relation of forest management to other forestry subjects. National, State, corporate, and private ownership as related to the management of forest property. *Time to be arranged.*

15. Wood Technology.—The common commercial woods classified as to their physical properties and their economic uses. Methods of identification other than microscopic. Mechanical, chemical, and other properties of wood. Elective for seniors majoring in Forestry and for other students who have taken Biology 1 and 10.

16. Thesis Work.—The preparation of a thesis. *Throughout the senior year as arranged.*

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry.

HOME ECONOMICS

Associate Professor Comstock; Miss Palmer

1. Cookery.—Lectures, recitations and laboratory practice. This course provides instruction in the general principles controlling the preparation of food with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Lecture, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

2. Cookery.—Continuation of course 1. The serving of simple meals with the study of dining room equipment and rules of table service are included in this course, as well as instruction in marketing and general household accounts. It is the aim of this course to familiarize the student with the business side of housekeeping. Open to students who have completed Course 1. Lecture, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

3. Dietetics.—A general review of the principles of cookery with direct reference to diet. Special emphasis is placed upon diet for children both in health and disease. Open to students who have completed Courses 1 and 2. Lecture, *two hours a week;* laboratory, † *two hours a week.* Fall semester.

4. Dietetics.—Continuation of Course 3. Special consideration of food for sick and convalescent with a study of diseased conditions

especially affected by the diet. Open to students who have completed Course 3. Lecture, *two hours a week;* laboratory, † *two hours a week.* Spring semester.

5. Advanced Cookery.—A return to general cookery is made through work in large quantities and the preparation and serving of meals. Canning and preserving are taken up and demonstrations given by the students. Open to students who have completed Course 4. Lecture, *one hour a week;* laboratory, † *three hours a week.* Fall semester.

6. Fancy Cookery and Field Work.—The preparation, garnishing, and decorating of the more elaborate dishes are taken up as well as the preparation and serving of a formal dinner. Wholesale and retail markets, factories, mills, and dairies are visited as opportunity offers. Open to students who have completed Courses 1 and 2. † *Three hours a week.* Spring semester.

7. Advanced Cookery.—This course embraces the principles of Course 5, and is required of students in the two years course. Prerequisites, Courses 1 and 2. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

8. Dietetics.—This course embraces the principles of Courses 3 and 4, and is required of students in the two years course. Prerequisite, Course 7. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

9. Plain Sewing.—The fundamental principles of hand and machine sewing are taught in connection with the making of undergarments, towels, napkins, etc. † *Four hours a week.* Fall semester.

10. Advanced Sewing.—Pattern drafting and adjustment. Dressmaking. Continuation of Course 9. † *Four hours a week.* Spring semester.

11. Fine Sewing.—Fine hand and machine work, hemstitching, and simple embroidery. Courses 9 and 10 are prerequisites. † *Four hours a week.* Fall semester.

12. Handwork.—Basketry and weaving. † *Four hours a week.* Fall semester.

13. Handwork.—Knot and string work. Knitting and crocheting. † *Four hours a week.* Spring semester.

14. Advanced Handwork.—Continuation of Courses 12 and 13. † *Four hours a week.* Spring semester.

15. Art.—A study of line, mass, and color. Lecture, *one hour a week;* laboratory, † *three hours a week.* Fall semester.

16. Art.—Continuation of course 15. Emphasis is placed upon design. Lecture, *one hour a week;* laboratory, † *three hours a week.* Spring semester.

17. Construction.—A study of the house and plans for its construction. Laboratory work in designing and executing ground floor plans for a modest home and plans for kitchen laboratories. Special attention given to details. Lecture, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

18. House Furnishing and Decoration.—Study of textiles, source, nature, preparation, use, etc., and a study of color schemes especially adapted to use in house decoration. The special problem of decoration for the house planned in Course 17 is taken up and the color schemes worked out in actual materials. Course 17 is a prerequisite. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

19. Household Economics.—Lectures, recitations, and practice. The principles of housework examined. Methods studied and practical applications made. Lecture, *one hour a week;* laboratory, † *one hour a week.* Fall semester.

20. Laundering.—Principles and processes studied and practiced. Selection and care of equipment for both home and school work. Removal of stains, bluing, softening of water, soap making. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

21. Practical Housework.—A course affording opportunity for the student to show her power in managing a household and serving luncheons to twelve or more people in a specified time, and with a limited amount of money. Time to be arranged. *Two hours* credit *a week.* One semester. Senior year.

22. Home Nursing.—Consideration of the sick room and its appointment, emergencies, contagious diseases, bandaging, general care of the patient. *One hour a week.* Spring semester.

23. Seminar.—General discussion of articles relating to Home Economics appearing in the magazines. An effort is made to keep in touch with the literature of the subject, and be conversant with recent methods and developments. *One hour a week.* Spring semester.

24. Methods.—The particular methods applicable to teaching Home Economics are investigated. An effort is made to discover the means whereby a wholesome atmosphere may be secured in the class room, and how the independence and self-confidence of the pupils may be fostered. Courses of study are considered and outlined. *One hour a week.* Fall semester.

25. Practice Teaching.—Required of students in the senior year, and done under supervision. *Two hours* credit.

26. Thesis.—A thesis on a subject relating to Home Economics showing independent work is required of all students taking the four years course. Equivalent to *three hours a week* one semester. Senior year.

HORTICULTURE

Associate Professor Hitchings; Mr. Darrow

1. Principles of Fruit Growing.—A study of orchard sites and soils, methods of setting, cultivating, fertilizing, pruning, and spraying. *Two hours a week* in class room and † *four hours a week* in the laboratory. Spring semester.

2. Fruit Handling.—A course in methods of picking, grading, packing, storing, and marketing fruit. The laboratory work of this course will acquaint the student with the more important varieties of fruit in this State. *Two hours a week* in class room and † *two hours a week* in the laboratory. Fall semester.

3. Systematic Pomology.—A systematic study of the types and varieties of the leading groups of fruits, their evolution and adaptation to environment. Also distribution of varieties in the State. Open to students who have taken Courses 1 and 2. *Two hours a week* in class room and † *two hours a week* in the laboratory. Fall semester.

4. Vegetable Gardening.—A course in practical vegetable gardening; grading, marketing and storing of vegetables, including the systematic study of varieties and types for home and commercial use. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Fall semester.

5. Small Fruit Culture.—A study of the bush and vine fruits, including strawberries; adapted varieties, with culture, picking, grading, packing, and marketing—home and commercial. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Spring semester.

6. Greenhouse Management and Construction.—A study of the different greenhouse crops, supplemented by practice in the regular greenhouse operations and including a study of the principles of greenhouse construction and heating. *Two hours a week* in the class room and † *two hours a week* in the greenhouse. Spring semester.

7. Plant Breeding.—A course in plant breeding as applied to variation, selection, and hybridization as adapted to garden and fruit crops. *Two hours a week.* Spring semester.

8. Landscape Gardening.—A study of the principles of landscape art and of the materials used in making landscape pictures. Special attention is given to the improvement of the home grounds. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Fall semester.

10. Thesis.—Students specializing in Horticulture are required to prepare a thesis on some subject pertaining to Horticulture. *Three hours a week.* Fall and spring semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 198.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 199.

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*
DEAN
MERRITT CALDWELL FERNALD, PH. D., LL. D.
Emeritus Professor of Philosophy
LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological Chemistry
JAMES NORRIS HART, C. E., M. S., Sc. D.
Professor of Mathematics and Astronomy
JOHN HOMER HUDDILSTON, PH. D.
Professor of Greek and Classical Archaeology
JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages
GEORGE DAVIS CHASE, PH. D. *Professor of Latin*
CAROLINE COLVIN, PH. D. *Professor of History*
WALLACE CRAIG, PH. D. *Professor of Philosophy*
ROLAND PALMER GRAY, M. A. *Professor of English*
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*
GUY ANDREW THOMPSON, M. A. *Professor of English Literature*
WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*
ARTHUR JULIUS JONES, PH. D. *Professor of Education*
GEORGE WARE STEPHENS, PH. D.
Professor of Economics and Sociology
ARTHUR ADAMS, PH. D. *Professor of English (Summer Term)*
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry

ANDREW PAUL RAGGIO, PH. D.
Associate Professor of Romance Languages
LEON ELMER WOODMAN, PH. D. *Associate Professor of Physics*
HARLEY RICHARD WILLARD, PH. D.
Assistant Professor of Mathematics
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
ALICE MIDDLETON BORING, PH. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
LLOYD MEEKS BURGHART, M. A.
Assistant Professor of Chemistry
LOWELL JACOB REED, M. S. *Instructor in Mathematics*
ALBERT GUY DURGIN, M. S. *Instructor in Chemistry*
ROBERT RUTHERFORD DRUMMOND, PH. D.
Instructor in German
* SHERMAN DANIEL CHAMBERS, B. S. *Instructor in Mathematics*
WALTER EDMOND WILBUR, B. S. *Instructor in Mathematics*
ERNEST CLAUDE DREW, M. S. *Instructor in Physics*
* VICTOR ALVIN KETCHAM, A. B., LL. B. *Instructor in English*
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
CLAYTON ULREY, A. B. *Instructor in Physics*
HOWARD MADISON PARSHLEY, A. M. *Instructor in Zoölogy*
EMILE SAM SAMRA, B. ès L. *Instructor in German*
WEBSTER NEWTON JONES, M. A.
Instructor in Industrial Chemistry
HENRY ROBBINS BARROWS, A. B. *Instructor in English*
JOHN HARRY PARRY, A. B. *Instructor in English*
LEROY FRANKLIN BLISS, A. B. *Instructor in English*
HELEN CHARLOTTE WORSTER, A. B. *Assistant in English*

* Absent on leave from Sept. 1, 1912, to Sept. 1, 1913

GENERAL INFORMATION

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

1. Men and women who desire to pursue a cultural college course.

2. Men and women who desire to enter professional schools which require a collegiate degree.

3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 49-63. They are practically the same as for other New England colleges and may be met by a four years preparatory course in a good high school or academy.

FRESHMAN STUDIES

The character of the work of the first year is conditional somewhat upon the subjects offered for admission.

It is recommended that all students in this College register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR SUBJECT

Each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work: Biology (including Zoölogy, Botany, Physiology, and Entomology), Chemistry, Economics and Sociology, Education, English, German, Greek, History, Latin, Mathematics and Astronomy, Philosophy, Physics, Romance Languages (including French, Spanish, and Italian).

In many cases the selection of a major subject need not be made before the beginning of the sophomore year. A student may change his major subject with the consent of the Deans of the Colleges concerned; but no student will be graduated who has not finished all the work required for graduation in some one department, no matter how much

work he may have done in other departments. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this must be made up from such other related departments as the Professor under whose direction the major subject is taken may prescribe. The remainder of the student's work may be selected from any department or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject, and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his Major Instructor, and during the remainder of the course this Instructor acts as chief adviser in all matters relating to the curriculum, and is a representative of the student before the Faculty.

BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The curriculum demands a 25 credits course and is regularly completed in four years; but a student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years on their college course.

No outline of the curricula in the College of Arts and Sciences is given on the catalog, but students may have such an outline presented to them by applying to the Professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology. To meet the needs of students desiring a year of college work for admission to a medical school, a schedule of subjects has been outlined. These include: Biology 1; Chemistry 1, 2, 3, 4; English 4, 5; French or German 3a, 3b; Military Science 1; Physics 4, 5.

GRADUATE CURRICULA

A candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degrees.

No work done before the conferring of the bachelor's degree may be counted towards the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year .

The course of study shall be submitted to and approved by the committee on advanced degrees.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject.

GENERAL LECTURE COURSE

A course of weekly lectures is given in the College of Arts and Sciences each semester. Attendance is open to all and credit is granted to such students as meet the conditions imposed. During the present year, the lectures will be in charge of the departments of History, and Economics and Sociology in the fall semester, and the departments of Chemistry, Physics, and Mathematics in the spring semester.

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek.

ASTRONOMY

Courses in astronomy are described under the department of Mathematics.

BIBLIOGRAPHY

Professor R. K. Jones

1. Bibliography.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbinding and the care of books; library processes and aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.* Spring semester.

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen. Fall semester.

BIOLOGICAL CHEMISTRY

The courses in this department are described under the College of Agriculture.

BIOLOGY

Professor Chrysler; Assistant Professor Boring; Assistant Professor Conser; Mr. Parshley

The course in general biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

1. General Biology.—This course is designed to be part of the education of any college student and is open to all candidates for the B. A. degree, as well as to more special students. It is regarded as essential for all students in the College of Agriculture, including those taking the Forestry Curriculum, as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further work in either zoölogy or botany. In the laboratory each student studies with the microscope, or dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily.

Class-room, *three hours a week;* laboratory, † *four hours a week.* Throughout the year.

18. Principles of Breeding.—A general review of the facts that form the basis of our knowledge of inheritance. General biology is required as a preparation for this course. *Two hours a week.* Fall semester.

19. Sanitary Science.—Attention is given to the conditions that influence individual and public health. This includes the nature of diseases, their transmission and control, and laws of personal and community sanitation that are often violated and should be understood. Open to any woman student who has taken general biology. *Two hours a week.* Spring semester.

Zoology

2. Vertebrate Zoölogy.—Types of the Vertebrata are studied and their structure compared. Careful dissections are made of representatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by general biology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

3.—Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and organs and the methods of preparing them for microscopic study, students thus becoming familiar with hardening, embedding, sectioning, staining, and mounting. Vertebrate zoölogy is required as a preparation for this course. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

5. Animal Physiology.—Intended for those who already have an elementary knowledge of general biology and physiology. The course deals with the functions of the organs of the body and is accompanied by laboratory work to illustrate their activities. It should be preceded by animal histology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

6. Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes lectures on the comparative embryology of vertebrates; and laboratory work on the fish, frog, and chick. Vertebrate zoölogy is required as a preparation. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

7. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

8. Entomology.—This course opens with the study of the anatomy and development of insects, after which typical species of the Orders are studied with reference to their structure, habits, life-histories, and adaptations. Especial attention is given to the economic problems. General biology is required as a preparation. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

Botany

10. Plant Histology.—The microscopic structure of the higher plants: the cell; the various tissues; the root, stem, leaf, and spore-bearing organs; the adaptations of plants to external conditions, considered from the standpoint of structure; killing, sectioning, staining, and mounting of plant tissues. This course must be preceded by general biology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

11. Plant Physiology.—The plant is considered from the standpoints of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth; movement in response to stimuli. This course must be preceded by general biology, and should follow plant histology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

12. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. Courses which have recently been given under this caption include: Morphology of Pteridophytes; structure and technology of woods; structural and physiographic ecology; advanced plant physiology; special problems assigend to individuals. *The time varies and the work may be continued a number of semesters.* Fall and spring semesters.

13. Elementary Botany.—Studies in the structure and functions of the organs of plants; agents of pollination and the distribution of seeds and fruits; exercises in plant analysis and the identification of species in the field. Required of Two Years Pharmacy students. Class-room, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

14. Pharmaceutical Histology.—Exercises on the use of the microscope; the magnification of objects and microscopic measurements. A study of cells and tissues, and food products found in them; followed by exercises in the detection of the common adulterants of familiar drugs. Open to students who have taken elementary botany. Class-room, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

15. Plant Ecology.—Presents briefly two aspects of the subject: (1) Physiographic ecology studied in the field as far as the season permits; (2) Structural ecology, viz., the histological features characteristic of plants growing in extreme habitats, and of those having special modes of nutrition. The course must be preceded by plant histology. Class-room, *one hour a week;* laboratory, † *four hours a week.* Spring semester of even years.

16. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by general biology and may profitably be preceded by plant histology. Class-room, *two hours a week;* laboratory, † *two hours a week.* Spring semester of odd years.

17. Forest Botany.—This course consists of a systematic study of trees and shrubs, particular attention being given to those of the eastern states, and the identification of them in summer and winter aspects. Special attention is given to the forest trees of commercial value and their geographical distribution. Field work in the identification of local species and preparation of a forest herbarium are required in the autumn and early winter months. The course includes dendrology and forest ecology. This course must be preceded by general biology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Throughout the year.

CHEMISTRY

The courses in this department are described under the College of Technology.

ECONOMICS AND SOCIOLOGY

Professor Stephens

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics, production, distribution and consumption, values, commerce, labor problems, and various other topics in this field of study. Required of junior engineers and of all who take Course 1b. Open to others by special permission. Text-book and general discussions. *Two hours a week.* Fall semester.

1b. Advanced Political Economy.—This course is devoted to a more exhaustive study of special subjects in the economic field, comprising labor unions, methods of arbitration, tariff history and problems, trusts and their regulation, railroads, insurance, business organizations, immigration, exhaustion of natural resources, and other special topics. This course is open to all who have had or are taking Course 1a. Lectures, readings, papers, and discussions. *Three hours a week.* Fall semester.

2a. Money and Banking.—An introductory course to the study of money, banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Required of junior engineers and all who take Course 2b. Open to others by special permission. Text-book and lectures. *Two hours a week.* Spring semester.

2b. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. Open to all who have taken or are taking Course 1a, and to others only by special permission. *Three hours a week.* Spring semester.

3a. Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the State and property, and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. This course is open to those who have taken Course 1a, and to others only by special permission. Lectures, readings, and discussions. *Three hours a week.* Fall semester.

3b. Anthropology.—The evolutionary origin and history of man; characteristics of primitive man; departure from the animal status and beginnings of civilization; development of industries, arts, and sciences; growth of language, warfare, migrations, and social institutions. Open to all students. Students planning to specialize in Economics are advised to take this course before taking Course 3a. Text-book and lectures. *Two hours a week.* Given in the fall term of even years.

4a. Social Reforms.—Socialism, communism, and communistic settlements, anarchy, nihilism; European systems of workingmen's insurance; trade unions, relief associations, and other efforts providing against old age and misfortune. Lectures and readings. Open to those who have taken Course 3a and to others by special permission. *Three hours a week.* Spring semester.

4b. Ethnology.—Principles underlying racial distinctions; the origin and characteristics of races or general ethnic groups; the great migrations and changes worked by new environments and conflicts; modern racial problems in America, Europe, and Asia. Open to those who have taken Courses 3a or 3b. Lectures and discussions. *Two hours a week.* Given in the spring semester of odd years.

5. International Law.—The principles, history, and prominent "cases" of international law take up most of the course. Considerable attention will be given to American diplomacy and the most important foreign treaties. Text-book, lectures, and discussions. *Two hours a week.* Fall semester of odd years.

6. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every citizen should be familiar; rights; contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week.* Spring semester.

7a. Governments of Europe.—A brief review of the ancient types of government followed by a detailed comparative study of modern European national governments. Political parties and current national problems will receive some attention. Lecture course with readings. *Two hours a week.* Fall semester.

7b. Municipal Government.—A study of the system of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. Lectures and readings. *Two hours a week.* Given in the fall semester of even years.

8. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. Lectures and readings. *Two hours a week.* Spring semester.

9. Democracy, Its History and Institutions.—The class will study the beginnings and development or early forms of Democracy and trace the great world movement down through the ages to the present. The greater part of the time will be given to a study of the current democratic movements in Europe, Australasia, and the American states. Lectures and readings. *Two hours a week.* Given in the spring semester of even years.

10. Economic History.—The leading facts of the economic history of Europe and America, introducing the student to the fundamental causes which lie behind much of narrative history, and examining the material and industrial resources which make the wealth of nations. Lectures and readings. Open to all students. Recommended for students planning to take other economics courses. *Two hours a week.* Given in the fall semester of odd years.

Summer Term

Money and Banking.—An introductory course to the study of money, banking, and finance. The history of money and the principal forms of curency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Text-book and lectures.

Sociology.—This course is devoted to the study of the evolution of society and social institutions, the family, religious organisms, the State and property; and such current social problems as divorce, criminality and prison reform, poverty and its relief, etc. Lectures, readings, and discussions.

Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-books, readings, and discussions.

EDUCATION

Professor A. J. Jones

1. History of Education.—From the Greeks to Rousseau; ideals of education at each stage of development; the educational purpose, the subject matter, the methods, and the organization of education of each people or period and the results obtained: point of view; the effect on present education. *Three hours a week.* Fall semester.

2. History of Education.—Course 1 continued. The development of education traced down to the present time with special reference to education in the United States. *Three hours a week.* Spring semester.

3. Organization and Administration.—Problems growing out of the establishment, support, and control of schools; the part taken by different agencies in solving these problems,—the Nation, the State, and the local community; typical states studied; a comparative study of the organization and administration of education in Prussia, France, and England. Special study of the school system of Maine. *Three hours a week.* Fall semester.

4. Organization and Administration Continued.—Problems within the State; town schools and city schools; duties of all officers; certification; teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.* Spring semester.

5. Principles of Education.—The design of the course is to set forth (1) the meaning and aims of education as related to the individual and society; (2) the relative educational value of studies and their organization into the curriculum, as indicated by the recapitulation, culture epoch, formal discipline, and other theories; and (3) the meth-

ods of teaching as determined by the mental processes involved, particularly, instinct, habit, attention, interest, apperception, induction, and deduction.

6. Methods of Teaching.—The general principles underlying method will be considered and the place and function of the different studies discussed. Those interested in the teaching of special subjects will be given opportunity to specialize in the methods applying to these subjects. Observation of classes in the Orono high school and the higher grammar grades will constitute a regular part of this course.

8. Child Study.—Studies of the child from birth to maturity; the physical child; the order of development of the mental powers; adolescence; adaptation of studies to the child. Open to those only who have taken Course 5. *Three hours a week.* Spring semester.

9. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory to our public schools. Various problems will be investigated. *Two hours a week.* Fall semester.

10. Beginning Course in Education.—An introductory course in education. A general survey of the field of education, dealing with the aims of education, the applications of psychology to education, and some of the elementary principles of methods. Designed for those who are beginning the study of education or who cannot take the more specialized courses. *Three hours a week.* Spring semester.

11a and 12a. Practice Course.—Arrangements have been completed by which a limited number of students will be given the opportunity for practice work in the Orono high school. Careful supervision of the work will be made by the Professor in charge and by the Principal of the high school. Students who take this course will teach one period a day for a half year. During the year 1912-13 practice courses in English and mathematics are offered.

11b and 12b. Class Management.—General conduct of classes; art of questioning; oral and written tests; systems of marking; observation of classes. Required of all taking practice work. *One hour a week.*

Summer Term

1. Principles of Education.—This course deals with the fundamental basis, aims, and values of education; the relative educational

values of the different subjects both from the standpoint of the individual and that of society; and the principles underlying the course of study; it will also consider the phychological principles underlying the teaching process and determining the principles of method.

2. Methods of Teaching.—The general principles underlying method will be considered and the place and function of the different studies discussed. Those interested in the teaching of special subjects will be given opportunity to specialize in the methods applying to these subjects; reports will be made to the class and the methods discussed.

Many of the classes in other subjects will be thrown open to observation and a part of the time of this class will be spent in observing such work and in a discussion of the methods used.

3. School Problems.—This course is especially designed for principals and superintendents and any others who wish to make an intensive study of problems of school administration and school management. The topics discussed will depend on the needs of the class. The following topics are suggested: grading and promotion of pupils; the course of study; supervision; school finances; consolidation; reorganization of the high school; school programs; fatigue and school work; one session or two sessions; class management.

In addition to the regular courses, opportunity will be given for the investigation of special problems in education. Teachers, whether working for advanced degrees or nor, will be given the advice and help necessary for such investigation. If teachers who wish to do work of this kind will consult with the instructor some weeks in advance, arrangements may be made by which special material for the study may be collected.

ENGLISH

Professor Gray; Professor G. A. Thompson; Professor Daggett; Mr. Barrows; Mr. Parry; Mr. Bliss; Miss Worster

Eight hours in English are required for the Bachelor of Arts, and ten hours for the Bachelor of Science degrees. These credits are obtained somewhat differently in the several colleges: (1) in the College of Arts and Sciences by taking, during the freshman year, Courses

3, 4, 1a, and 1b; and during the sophomore year, Courses 2a and 2b, or 2c and 2d, or 8a and 8b; (2) in the College of Agriculture by taking, in the freshman year, Courses 3 and 4; in the sophomore year, Courses 1a and 1b; in the junior year, beginning with the fall semester of 1913, Courses 17 and 14; (3) in the College of Technology by taking 3, 4, and, for the present, 3b and 4b; and in the sophomore year, Courses 1a and 1b.

English 3 and 4 are pre-requisite, in all colleges, for courses of the sophomore year. The required courses of the freshman and sophomore years may not be postponed until the junior or senior year, without permission of the head of the department.

Elective courses in this department should be taken, so far as practicable, in the following order:

First year: Courses 6, 7.

Second year: Courses 6, 7, 8, perhaps 5a and 5b, 15, 20, 21, 31.

Third year: Courses 9, 10a and 10b, 11a and 11b, 12a and 12b, 13, 15, 16a and 16b, 18a and 18b, 19a and 19b, 20, 21, 23, 26.

Fourth year: Courses 10a and 10b, 12a and 12b, 13, 9a and 9b, 23, 26, 18a and 18b, perhaps 24, 25, 27, 30.

Students are expected to consult the head of the department, if they find it necessary to make a change.

Courses in Composition

3. English Composition and Rhetoric.—The object of this course is to give training in writing correct and clear English. One composition written outside of class and about two themes written in class are required each week. The theoretical work consists of the study of the fundamental principles of good usage in English writing; and of the narrative and descriptive forms of composition. In illustration of the theory many selections from literature are studied. This course is prescribed for freshmen. Each section is limited to twenty students. *Two hours a week.* Fall semester.

4. English Composition and Rhetoric.—The object of this course is the same as in Course 3. The theoretical work consists of a study of the more elementary principles of exposition and argumentation. Practice in making outlines and briefs; themes and fortnightly essays. This course is prescibed for freshmen. Each section is limited to twenty students. *Two hours a week.* Spring semester.

3p. Composition.—This course is open only to freshmen in the College of Technology. The object of the course is to give practice in certain practical forms of composition, such as note taking, business letters, reports of scientific data, etc. Part of the time at the outset is devoted to instruction in the use of the library and to bibliography. Some time is also spent on the fundamental principles of logic. *Two hours a week.* Fall semester.

2a and 2b. Expository Composition.—A lecture course of one hour on the theory of exposition. A second hour is devoted to writing in order to cultivate facility; monthly essays and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

2c and 2d. Argumentative Composition.—A lecture course of one hour on the theory of argumentation. A second hour is devoted to making briefs and writing short arguments in order to cultivate logical mehods and facility; monthly essays and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Prerequisites: English 3, 4, 2a, and 2b, or 2c and 2d, and 8. *Two hours a week.* Fall semester.

17. Composition.—This course gives practice in technical journalism and news writing, in making reports and summaries of investigation, and in the preparation of theses. Open only to juniors in the College of Agriculture. *Two hours a week.* Fall semester.

Courses in Public Speaking

1a and 1b. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first semester consists in voice training by means of practice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of

ease in pose and gesture. During the second semester the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students' own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. *Once a week* throughout the year. Open only to freshmen in the College of Arts and Sciences.

1a[1] and 1b[1]. Public Speaking.—This course is entirely practical; the formal discussion of the theory of elocution is excluded. The work consists in the writing and delivery of speeches upon subjects in which the student is interested and informed. Speeches, argumentative or otherwise, will be written and delivered as if before a business corporation, a grange, an electrical engineering, or other scientific society, a political organization, etc. Conferences will be held for criticism. Open only to freshmen in the Colleges of Agriculture and Technology. *One hour a week.* Fall and spring semesters.

18a and 18b. Debating.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading questions of the day debated. *Two hours a week.* Prerequisites, Courses 1a and 1b, or 1a[1] and 1b[1], 3, 4, 2c, and 2d.

22. Oral English.—A fundamental course in voice production, diction, and interpretation of literature. Practice in reading lyric, narrative, and dramatic forms with constant application to the requirements of public speech. *Two hours a week* throughout the year. Not given in 1912-13.

23a and 23b. Public Speaking.—Forms of address. A study of persuasion applied to letters, editorials, and speeches for various occasions. Preparation of public addresses, and practice in extempore speaking. *Two hours.* Fall semester. An elective course open to juniors in all colleges.

Courses in Language and Literature

4p. Literature.—The careful reading of a few masterpieces of prose and poetry. Open only to freshmen in the College of Technology. *Two hours a week.* Spring semester.

5a. Old English (Anglo-Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German. Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Fall semester. Given in 1913-14 and alternate years.

5b. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary, and archæological interests. *Three hours a week.* Spring semester. Prerequisites, Course 5a.

6. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall semester.

7. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring semester.

8a. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the freshman or sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.* Fall semester.

8b. History of English Literature.—A continuation of Course 8a, covering the periods from the seventeenth century to the present day. *Three hours a week.* Spring semester.

9a. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader. Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Fall semester. Prerequisite, Course 5a. Given in 1912-13 and alternate years.

9b. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical, and literary interests. *Three hours a week.* Spring semester. Given in 1912-13 and alternate years.

10a. Shakspere and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakspere, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakspere, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

10b. Shakspere.—A detailed study of three or four great tragedies of Shakspere. *Two hours a week.* Given in 1913-14 and alternate years.

11a. American Literature.—A lecture course giving an historical outline, with assigned reading. *Two hours a week.* Fall semester. Prerequisites, Courses 8a and 8b.

11b. American Literature.—A continuation of Course 11a. *Two hours a week.* Spring semester.

12a. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

12b. The Novel.—A continuation of Course 12a. *Two hours a week.* Spring semester. Given in 1913-14 and alternate years.

14. Literary Types.—Great books, typical of the several forms of literature, will be read. An endeavor will be made to cultivate an appreciation of the best, both in prose and poetry, and to acquire critical knowledge of what constitutes a great drama, a great epic, a great lyric, a great novel, etc. Open only to juniors in the College of Agriculture. *Two hours a week.* Spring semester.

15. Victorian Poets.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in the poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.* Fall and spring semesters.

16a. History of English Literature.—A lecture course giving a brief survey of the development of English literature, extending to the close of the sixteenth century. Assigned reading and reports. *Two hours a week.* Fall semester. Open to technical students only.

16b. History of English Literature.—This course continues the work of 16a, covering the periods from the sixteenth century to the present time. *Two hours a week.* Spring semester. Open to technical students only.

19a. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

19b. Elizabethan Poetry and Prose.—A continuation of course 19a. The study of Elizabethan poetry will be completed, and the larger part of the semester given to the study of the prose of the period. *Two hours a week.* Spring semester. Given in 1913-14 and alternate years.

20. English Romantic Poets.—A general view of the English Romantic Movement, with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thomson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Fall semester. Given in 1912-13 and alternate years.

21. English Romantic Poets.—A continuation of Course 20. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Spring semester. Given in 1912-13 and alternate years.

5a and 5b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates.

22. Cynewulf.—Reading of The Christ, and The Elene; and possibly some of the poems attributed to Cynwulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Prerequisite, Courses 5a and 5b. *Three hours a week.* Fall semester.

9a and 9b. See corresponding numbers under courses in language and literature. These courses are open to graduate students who did not take them as undergraduates. Prerequisites, Courses 5a and 5b.

27. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.* Fall and spring semesters.

24. The Victorian Feriod (1830-1900).—A study of the literary, social, and scientific movements in England and America; the rise of periodical literature, tractarianism, Pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thackeray, George Eliot, Jane Austen, and the Brontes. *Two hours a week.* Fall and spring semester.

25. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, drama, and the English metres. *One hour a week.* Spring semester.

26. History of the English Drama.—Especial attention is given to the immediate predecessors and the contemporaries of Shakspere. *Two hours a week.* Given in 1912-13 and alternate years. Fall and spring semesters.

27. Teachers' Course in English.—This course is conducted in coöperation with the department of Education. It is open only to major students in English, and of these only, as a rule, to seniors and graduate students. The work is mainly practical with some theory.

30. Literary Seminar.—Given in 1912-13. Fall and spring semesters. Subject: a study of poetics and English versification.

SUMMER TERM

Professor Adams; Mr. Ketcham; Miss Coffin

1. Courses in Preparatory English.—The work is designed for those who have entrance credits to make in this department.

a. English Composition.—The purpose of this course is to give a thorough drill in correct writing. Special attention will be given to spelling, grammar, punctuation, sentence, and paragraph formation. *Three times a week.*

b. English Literature.—A careful, yet necessarily rapid study of Shakspere's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Washington's Farewell Address; Webster's First Bunker Hill Oration; and Macaulay's Life of Johnson.

2. Composition for Teachers of English.—This course includes the theory and practice of both oral and written composition. Problems connected with the teaching of composition in the schools will be discussed. Particular attention will be given to methods of conducting debates in high schools.

3. English Composition and Rhetoric.—The work in this course is similar to that of the fall semester of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-books used will be Woolley's Hand-book of Composition. Nason's Theme Writing, Gray's College Theme Tablet.

5. Expository and Argumentative Writing.—This course is similar to that of the spring semester of the freshman year. The basis of the theoretical work is an analysis of prose selections in Percival and Jelliffe's Selections of Exposition and Argument. Essays and conferences.

5. Teachers' Course in Literature.—Certain books chosen by the class from the A and B lists of books required for admission to college will be studied, and the methods of teaching them discussed.

6. English Literature in the Time of Shakspere.

7. English Prose of the 19th Century.—Lectures and considerable reading. Especial attention will be given to the appreciation of the higher qualities of style.

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry.

GERMAN

Professor G. W. Thompson; Doctor Drummond; Mr. Samra

1 and 2. First Year German.—A course for beginners. German composition; numerous texts read; conversation. *Five hours a week* throughout the year.

3a, 3b. Second Year German.—A course for students who have had Courses 1, 2, or equivalent. The grammar study, composition, and text reading are progressively advanced from Courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

4a, 4b. Third Year German.—A course for students who have had Courses 1 and 2 and 3a, 3b or equivalent. Texts include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week* throughout the year.

5a, 5b. Fourth Year German.—An advanced course for students who have had Courses 1, 2, 3a, 3b and 4a, 4b, or equivalent. Texts include 19th century literature; advanced composition with original themes; lectures on history of German literature completed. *Three hours a week* throughout the year.

These courses are carefully graded in difficulty and are to be taken in the order named.

Courses 1 and 2 are open only to students who are registered in the College of Arts and Sciences.

For the convenience of other students who wish to begin the study of German the following courses are offered:

Courses 1 and 2. A separate division for those who desire to pursue beginners' German five hours a week, or Courses 1a, 1b and 2a, 2b in which the work of Courses 1 and 2 may be completed in two years.

1a, 1b. Elementary German.—Study of grammar, composition, and easy texts which contain a practical vocabulary. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

2a, 2b. Continuation of Course 1a, 1b.—More advanced study of grammar, composition and texts. Open to students who have completed Courses 1a, 1b, or equivalent. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

Note.—Course 2a, 2b is not equivalent for Course 3a, 3b.

6a, 6b. German Conversation.—*Two hours a week* throughout the year.

7a, 7b. Advanced Conversation and Composition. *Two hours a week* throughout the year.

8a, 8b. History of German Literature.—Lectures with assigned readings. *One hour a week* throughout the year.

9a, 9b. History of the German Novel.—Lectures given in even years. *Two hours a week* throughout the year.

10a, 10b. History of the German Drama.—Lectures given in odd years. *Two hours a week* throughout the year.

11a, 11b. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week* throughout the year.

12a, 12b. History of German Education.—Lectures. *One hour a week* throughout the year.

13a, 13b. Old High German.—Wright's Old High German Primer; whose major subject is German. *Two hours a week* throughout the year.

14. Gothic.—Conditions for electing this course are the same as for Course 13a, 13b. Wright's Gothic Primer. *Two hours a week.* Fall semester.

15. Middle High German.—The conditions for electing this course are the same as for Course 12 and 13. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.*

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

Summer Term

Professor G. W. Thompson

1. Elementary Course.—For those who wish to acquire or review the essentials of German grammar and the foundations of a German vocabulary.

2. Second Year German.—This course is designed for students who have completed a year's work in German or for such teachers as may wish to review their work in this department.

3. Conversational German.—For those who have taken at least one year of German and wish to get practice in speaking and hearing German. German stories will be reproduced orally and in writing. There will also be German dictation and memorizing of German songs. *Twice a week.*

4. German Literature.—A brief course of lectures covering a period of German literature. This course is designed for advanced students. *Three times a week.*

Other advanced courses in German may be substituted for Courses 2 and 4 if they seem better adapted to the needs of the students.

GREEK AND CLASSICAL ARCHAEOLOGY

Professor Huddilston

The department of Greek is arranged with the idea of presenting to the student an opportunity of becoming acquainted with several phases of Hellenic civilization and such courses are offered as will prove serviceable not only to those pursuing the classical languages but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college curriculum some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

Courses 1-10 cover the field of Greek language in its several periods of poetry and prose and assume the usual preparatory work in Greek.

1. Xenophon.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall semester.

2. Homer.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring semester.

3. Attic Orators.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall semester.

4. Greek Tragedy.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring semester.

5. Thucydides.—Books II-III. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Three hours a week.* Fall semester. Open to students who have taken Courses 1 and 3.

6. Aristophanes.—The Clouds and The Knights; lectures and collateral reading on the development of Greek comedy. Open to students who have taken Courses 2 and 4. *Two hours a week.* Spring semester.

7. Plato.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. Open to students who have taken Courses 3 and 5. *Two hours a week.* Fall semester.

8. Pindar.—The Olympian and Pythian Odes; supplementary reading on the history of Greek lyric poetry. *Two hours a week.* Spring semester.

9. Greek Prose Composition.—A course in writing Greek, intended to continue the work begun in Course 1. *One hour a week.* Spring semester.

10. Greek Prose Composition.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall semester.

Courses 11-16 offer an introduction to the literature, religion, customs, art, and history, and are adapted to the needs of students who may wish to devote only a year or two to Greek subjects.

11. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of Greek based on the text. *Five hours a week.* Fall semester.

12. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose selections from Homer's Iliad. *Five hours a week.* Spring semester.

13. Greek Private Life.—Lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.* Fall semester.

14. Greek Religion.—A study of the chief divinities in ancient Greek religion, and their relation to art and literature; lectures and assigned reading; investigation of special topics by members of the class. *Two hours a week.* Spring semester.

15. Greek Literature.—A general view of the rise and development of the literature of ancient Greece with special emphasis upon the literary standards established by the Greeks; assigned readings in translation and investigation of special topics supplemented by lectures. *Three hours a week.* Fall semester of odd years.

16. Greek History.—A brief survey of the Pre-Greek nations with reference to their legacies to civilization, followed by the history of Greece from the earliest times down to the absorption of Greece by Rome. The development of political ideals, and the forces that were basal in Greek civic life and government will be kept to the front. Oman's History of Greece will be used, accompanied by collateral reading and lectures. Open to all students. *Three hours per week.* Fall semester of even years.

17. History of Old Testament Literature.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Old and New Testament Canons will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Fall semester. Given in 1913-14 and alternate years.

18. History of New Testament Literature.—A continuation of Course 18. Open to all students. *One hour a week.* Spring semester. Given in 1913-14 and alternate years.

For several years there has been a three hour course in Greek Fine Arts during the spring semester, and four courses on the history of Italian Painting given one hour per week through a period of four semesters.

Beginning with the fall semester of 1913 instruction in the history of the Fine Arts will be materially enlarged.

Under the new plan, there will be two three hour courses extending through two semesters each, thus presenting an opportunity for the student to cover the entire field of ancient and modern art history in its various bearings on the history of Europe down to the close of the 18th century.

Oriental, Greek, and Roman art will be given in a three hour course extending through the year and Mediæval and Modern art will follow this for two semesters for the same number of periods.

While it is not absolutely essential that a student should have taken Courses 1 and 2 in order to be admitted to 3 and 4 it is highly desirable that a sequence should be observed and that the historical evolution of the great art epochs should be approached in such a manner as to contribute the largest educational values.

1. Art.—The history of art in ancient Egypt and western Asia with special reference to the buildings of the Egyptians as exhibiting the best index to the history of that remarkable race. This chapter will be a fore-word to the beginnings of art in south-eastern Europe; the Cretan and Mycenaean periods preceeding the early Greek period. The history of Greek architecture and sculpture will be given down to the beginning of Athenian supremacy. The extant monuments will be studied in photographs and with the aid of the stereopticon. Lectures, note-books, text-book, and discussions. *Three hours per week.* Fall semester, 1913-14.

2. Art—Greek and Roman art in its broad relations to the public life of Classical times: the influence and force of art culture as a dominant force in Greece and the effects of Greek culture upon Rome. Emphasis will fall upon the existing remains in the great European collections, and these museums as well as the monuments still *in situ* in Italy, Sicily, Greece, and Asia Minor will be gone over in detail with the photographs.

Each student will be expected to acquire some ability in independent estimate of the styles of the various epochs. Lectures. *Three hours per week.* Spring semester, 1913-14.

3. Art.—The history of art as influenced and modified by Christianity; Romanesque architecture in the South and the new Gothic in the North; the early centuries of painting in Italy and the influence of The Fine Arts in the 14th and 15th centuries, particularly in Florence, Siena, Ravenna, Venice and Rome; the spirit of the Renaissance in Italy, France, and Germany under the domination of Italy.

Lectures, study of photographs and investigation of various topics by each member of the class. *Three hours per week.* Fall semester, 1914-15.

4. Art.—Art in the north of Europe and in Spain, particularly the schools of painting and palace architecture in France. The great age of Louis XIV reflected at Versailles and in the Louvre; the new importance of artists as international factors at Madrid, Paris, and London; social evolution and contemporary history reflected in the successive schools of artists with the gradual ascendency of France until the time of the French Revolution. Lectures, text-book, study of pictures, special subjects for individual investigation. *Three hours per week.* Spring semester, 1914-15.

5. Architecture.—A chronological survey of the development of ancient and modern architecture down to 1600 A. D. Greek and Roman architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures, outside reading, and detailed study of the reproductions in the Art Collection. Open to all students. *Two hours per week* for the year. Given in 1912-13.

6. Architecture.—A continuation of Course 5. *Two hours a week.* Spring semester. Given in 1912-13.

HISTORY

Professor Colvin

Greek History and Roman History are given in the departments of Greek and Latin.

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesias-

tical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Open to all students. *Three hours a week.* Fall semester.

2. Modern History.—Continuation of Course 1 to the present time. A rapid survey of the Reformation; the absolute monarchy in France; the French Revolution; the Napoleonic era; Europe in the nineteenth century. Open to all students. *Three hours a week.* Spring semester.

Courses 1 and 2 are given in 1912-13 and alternate years.

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Open to all students. *Three hours a week.* Fall semester.

4. History of England.—Continuation of Course 3. From the beginning of the Stuart period to the present. Open to all students. *Three hours a week.* Spring semester. Courses 3 and 4 will be given in 1913-14.

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.* Fall semester.

6. History of the United States.—The period from 1783 to 1848. This course will begin with a brief study of Colonial history from 1750. Open to all students. *Three hours a week.* Fall semester.

7. History of the United States.—A continuation of Course 6, from 1848 to the present time. Open to all students. *Three hours a week.* Spring semester.

8. Industrial and Social History of England.—The medieval manor town, guild, and foreign trade; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. *Two hours a week.*

The following courses are open only to advanced students:

9. The Renaissance and the Reformation.—The period from 1300 to 1658 A. D. *Two hours a week.*

10. The Renaissance and the Reformation.—A continuation of Course 9. *Two hours a week.*

11. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

12. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

13. Modern Continental Europe.—The period since 1815. *Three hours a week.*

14. Historical Construction and Criticism.—*One hour a week.*

Summer Term

1. United States History.—A brief course of two recitation periods a week, reviewing the work done in preparatory school. This course is designed to prepare a student who has taken the course in United States history for the entrance examinations of the University.

2. English History.—This course will be given three times a week, and has a purpose similar to that of the course in United States history.

3. Modern European History.—A course designed for teachers and graduate students. It covers the history of Western Europe from 1500 to date. *Five hours a week.*

4. Advanced History.—A course in advanced history will be offered to graduate students and others who are prepared to take it. The character of the work will be determined by the requirements of the students who elect it.

LATIN

Professor Chase

1. Livy and Composition.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four hours a week.* Fall semester.

2. Cicero and Horace.—Cicero, De Senectute; Horace, Odes and Epodes; Latin composition. *Four hours a week.* Spring semester.

Courses 1 and 2 are required of candidates for the Bachelor of Arts degree who elect Latin.

3. Tacitus.—Reading and discussion of the Agricola and Germania. *Three hours a week.* Fall semester.

4. Terence and Plautus.—The Phormio of Terence; the Captivi and Trinummus of Plautus; study of early Latin and the development of Roman comedy. *Three hours a week.* Spring semester.

5. Latin Composition.—Practice in writing Latin; study of Latin syntax. *One hour a week.* Fall semester.

6. Latin Composition.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.* Spring semester.

7. The Younger Pliny.—Reading of selected letters of Pliny; the Roman Empire. *Three hours a week.* Given in the fall semester of even years.

8. Horace and Juvenal.—Reading of selections from the great satirists; study of Roman satire and social life. *Three times a week.* Given in the spring semester of odd years.

The following may be counted toward the Master's degree:

9. Tacitus.—Reading of the Annales and study of the reign of Tiberius. *Three hours a week.* Given in the fall semester of odd years.

10. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; study of elegiac poetry. *Three hours a week.* Given in the spring semester of even years.

11. Roman Philosophy.—Reading from Cicero's philosophical writings and from Lucretius; discussion of the leading schools of ancient philosophy. *Three hours a week.* Given in the fall semester of even years.

12. A continuation of Course 11. *Three hours a week.* Given in the spring semester of odd years.

13. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken Courses 1-4. *Three hours a week.* Given in the fall semester of even years.

14. Roman Literature.—A continuation of Course 13. *Three hours a week.* Given in the spring semester of odd years.

15. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken Courses 1-4. *Three hours a week.* Given in the fall semester of odd years.

16. Roman Rhetoric and Oratory.—A continuation of Course 15. *Three hours a week.* Given in the spring semester of even years.

18. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken Courses 1-4. *One hour a week.* Given in the fall semester of odd years.

19a. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages; Latin phonetics; development of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in the fall semester of odd years.

19b. The Latin Language.—A continuation of 19a. *One hour a week.* Given in the spring semester of even years.

20. Roman Epigraphy.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring semester of even years.

21. Teachers' Course.—Discussion of topics connected with the teaching of Latin in secondary schools. Study of selected passages of Cæsar, Cicero, and Vergil. *One hour a week.* Fall semester.

22. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

23. Sanskrit.—A continuation of Course 22, with more attention to the classical literature of India. *Two hours a week.*

24. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archaeolgy, etc. *One hour a week.* Given in the fall semester of even years.

25. Roman History.—The development of Rome to the time of Augustus. Lectures, reading, and recitations. *Three hours a week.* Given in the fall semester of odd years.

26. Roman History.—The Roman Empire. A continuation of Course 25. *Three hours a week.* Given in the spring semester of even years.

Summer Term

The Latin department offers three distinctly different lines of study, intended to meet the needs of three classes of students.

1. For teachers of Latin, and for students wishing to gain entrance credits in Latin. One course is offered in Cicero's Speeches and one in Cæsar's Gallic War. In these two courses various questions connected with the teaching of Latin will be discussed, such as questions of spelling and pronunciation, of grammatical forms and inflections, of syntax, prosody, etc.; also questions of bibliography, methods of translation, history, mythology, literature, and the various aids to the elucidation of the authors studied, together with the fundamental principles of the Latin language.

2. For students who desire college credits looking to the B. A. degree. It is the plan of the department to offer a double course that shall cover the work of an entire college semester and be equivalent to that required for one college credit, and to vary this course from year to year so that a student in a few summers may complete a fairly comprehensive course of college study in Latin. The choice of subject will rest partly with the class. We call the especial attention of secondary school teachers who have not had the advantage of complete college training in Latin to these courses, as we believe they afford an unusual opportunity to them to increase their equipment.

MATHEMATICS AND ASTRONOMY

Professor Hart; Assistant Professor Willard; Assistant Professor Hamlin; Mr. Reed; Mr. Wilbur

Students electing Mathematics as a major subject should expect to take Courses 1, 2, 6, 7, 8, 11, 12, 13, 15, 19, 20, 21 and either Courses 9 and 10 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

1. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book is Stone and Millis's Solid Geometry. *Three hours a week.* Spring semester. Open to all freshmen who did not offer it for admission.

2. Algebra and Trigonometry.—A brief review of radicals, the theory of exponents, quadratic equations, and the binominal theorem; logarithms, including practice in the solution of numerical exercises; the trigonometric functions; radian measure; functions of several angles; solution of right and of oblique triangles; trigonometric equations; inverse functions; determinants; theory of equations. The text-book is Brenke's Advanced Algebra and Trigonometry. *Five hours a week.* Fall semester.

3. Applications of Trigonometry.—A course given for students in Agriculture and Forestry, and open to others who have taken Course 2. Further practice in the solution of problems with application to plane surveying. *Two hours a week.* Spring semester.

6. Analytic Geometry.—The point, line, circle, and conic sections; higher plane curves; elements of solid analytic geometry. The text-book is Riggs's Analytic Geometry. *Five hours a week.* Spring semester. Open to students who have had Course 2 and the equivalent of Course 1.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken Courses 1, 2, and 6. The text-book is Osborne's Differential and Integral Calculus. *Five hours a week.* Fall semester.

8. Calculus.—A continuation of Course 7. Integration of the elementary forms; integration between limits; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring semester.

9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects, and work in the observatory. Open to students who have taken Courses 1, 2 and, preferably, Physics 1 and Physics 5. The text-book is Young's Manual of Astronomy. *Three hours a week.* Spring semester.

10. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the students' own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, vertical circle, astronomical transit, and zenith telescope. Open to students who have taken Courses 9, 2, and 19. *Two hours af recitations or lectures and two hours of observatory work a week.* Fall semester.

11. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken Courses 1 and 2. *Three hours a week.* Fall semester.

12. Advanced Calculus.—This course is varied from time to time by using different texts. Open to students who have taken Courses 6, 7, and 8. *Three hours a week.* Given in the fall semester of odd years.

13. Advanced Integral Calculus.—A continuation of Course 12. *Three hours a week.* Given in the spring semester of even years.

15. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken Courses 7 and 8. *Two hours a week.* Spring semester.

16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students who have taken Courses 6, 7, 8, 9, 19, and, preferably, 10. *Three hours a week.* Fall semester.

17. Practical Astronomy.—A continuation of Course 16. *Three hours a week.* Spring semester.

19. Spherical Trigonometry.—The elements of this subject with problems and applications to spherical astronomy. *Two hours a week.* Spring semester.

20a. Advanced Analytic Geometry.—A course for students who have completed Courses 6, 7, 8 and 11. *Three hours a week.* Given in the fall semester of even years.

20b. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in the spring semester of odd years.

21a. History of Mathematics.—Lectures and recitations. *Two hours a week.* Given in the fall semester of even years.

21b. History of Astronomy.—Lectures and recitations. *Two hours a week.* Given in the spring semester of odd years.

22a. Differential and Integral Calculus.—A course given for students in Chemistry and for those in the College of Arts and Sciences who desire only a brief course in these subjects. *Thre hours a week.* Fall semester.

23a. Theory of Functions of a Complex Variable.—*Three hours a week.* Fall semester.

23b. Theory of Functions of a Complex Variable.—A continuation of Course 23a. *Three hours a week.* Spring semester.

Courses 23a and 23b are for graduate students. Other advanced courses will be given when called for.

For courses in mechanics and in descriptive geometry refer to the department of Mechanics and Drawing, and for courses in surveying refer to the department of Civil Engineering, in the College of Technology.

Summer Term

Professor Hart; Assistant Professor Hamlin; Mr. Reed

1. High School Algebra.—A course intended for teachers in preparatory schools, covering the second year's work. Especial attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are advised to take this course.

2. Plane Geometry.—A review of the more important theorems with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools, and for candidates for admission who are slightly deficient in geometry.

3. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Bush and Clarke's Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Well's, and other books will be used for reference.

4. Plane Trigonometry.—A brief course including the solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which may be useful for reference.

5. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. Text-book to be selected at the opening of the term.

6. Analytic Geometry.—A brief course covering the elements of this subject.

7. Differential and Integral Calculus.—A course intended for teachers in preparatory schools who desire to gain a knowledge of the elements of this subject.

8. Descriptive Astronomy.—Lectures accompanied by work in the observatory.

9. Calculus.—The equivalent of Mathematics 8.

10. Mechanics.—The equivalent of Mechanics 5.

11. Mechanics.—The equivalent of Mechanics 6.

Note.—Nine of the above courses will be given, the choice to be determined by the number of students electing.

Courses 9, 10, 11, and 12, being review courses, may be taken only by those who have previously pursued the subject.

MILITARY SCIENCE AND TACTICS

The courses in this department are described in page 198.

PHILOSOPHY

Professor Craig

Students intending to major in this department should begin with Courses 1 and 10. Those wishing only a minor amount of work in Philosophy may begin with any course except 1b, 8, 9, and, unless by permission of the instructor, 12.

Course 5b is open to freshmen. All other courses in this department are not usually elected by freshmen.

1a. Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and the psychology of sensation, perception, instinct, habit, and memory. The methods used are recitation, discussion, introspection (self-observation), observation of others, experiment, and demonstration. Students electing this course are advised to precede or accompany it with Biology 1; or if this be impossible, to read some good, recent book on evolution, and a similar work on human physiology. Two text-books: James's Psychology (Briefer Course); Pillsbury's Essentials of Psychology. *Three hours a week.* Fall semester.

1b. Psychology.—A continuation of Course 1, dealing especially with the higher psychic functions, such as imagination, conception, emotion, and will. All students who have taken Course 1a are advised to follow it with 1b. *Three hours a week.* Spring semester.

3. Morals.—A course designed to give the student practical aid in his or her life. A study of those qualities which chiefly contribute to success, as, honesty, industry, thrift, system, tact, sympathy, etc. No text-book. The students will write short accounts of their own experiences in the matters studied. *Two hours a week.* Fall semester.

4. Social Psychology.—A study of the social aspects of the individual mind; of the instincts which underly all social life; of social influence and social control; of fashion, convention, and custom; of the crowd, the mob, the public, and the deliberative assembly. The text-book is McDougall's Introduction to Social Psychology. *Two hours a week.* Spring semester.

5a. Inductive Logic.—A study of the method of science; the methods of gathering facts and of deriving correct conclusions from the facts. The text-book is Creighton's Logic. *Two hours a week.* Fall semester.

5b. Deductive Logic.—The purpose of this course is to develop clear thinking and the precise expression of thought in words. This is done largely by exercise in the solution of logical problems. Text-book: Creighton's Logic. *Two hours a week.* Spring semester. Courses 5a and 5b are independent of each other.

6. History of Ancient Philosophy.—Designed to give an insight into Greek and Roman thought as related to the life of the Greeks and Romans, and also to lay the foundation for a study of modern thought. Rogers's A Student's History of Philosophy is used as a text-book. *Three hours a week.* Fall semester of even years.

7. History of Modern Philosophy.—Continuation of the preceding course, but may be taken separately, having different interests, connected with modern history and modern thought in literature, science, art, and politics. Text-book as in the preceding course. *Three hours a week.* Spring semester of odd years.

8. Seminar.—For advanced students. Reviews of recent literature, both philosophical and psychological. The student may select literature on a topic in which he is especially interested. The work may be continued a number of semesters. *One hour a week.* Fall or spring semester.

9. Research.—Primarily for graduate students. *The number of hours a week* is not fixed, but must be arranged at the time of registration. Fall or spring semester.

10. Evolution.—The idea of evolution dominates all thought in our era. This course gives a broad and rapid survey of evolution in all its phases,—cosmic, geologic, organic, psychic, and social. Lectures and collateral reading. *Two hours a week.* Fall semester.

11. Problems of Philosophy.—Discussion of the bearing of philosophy upon science and upon life; materialism versus idealism; the relation of mind to matter; the nature of reality; the validity of knowledge; and similar fundamental problems. Text-book, Fullerton's Introduction to Philosophy. *Two hours a week.* Spring semester.

12. Readings in Modern Philosophy.—For students who are especially interested in the study of life, whether in psychology, child

study, animal behavior, sociology, history, biography, or allied fields. The works are different each time the course is given, and are adapted to the personnel of the class. Those read last year were Baldwin's Mental Development in the Child and the Race, especially the volume on Social and Ethical Interpretations, King's Psychology of Child Development, and Dewey's How We Think. *Three hours a week.* Fall semester of odd years and spring semester of even years.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 199.

PHYSICS

PROFESSOR STEVENS; ASSOCIATE PROFESSOR WOODMAN; MR. DREW; MR. ULREY

NOTE.—For students who are specializing in this department, the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.

1. GENERAL PHYSICS.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 2. *Five hours a week.* Fall semester.

2. GENERAL PHYSICS.—A continuation of Course 1. Heat and electricity. *Three hours a week.* Spring semester.

3. QUALITATIVE LABORATORY WORK.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in Courses 1 and 2. * *Five hours a week.* Fall semester.

4. GENERAL PHYSICS.—A course covering the ground of Course 1, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Crew and Jones's Elements of Physics. *Five hours a week.* Fall semester.

5. Laboratory Physics.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either Course 1 or Course 4. **Five hours a week.* Spring semester.

6. Meteorology.—A course covering the essential principles of the subject of meteorology, including a study of meteorological instruments and weather predictions. Milham's Meteorology is used as a text-book. *Two hours a week.* Spring semester.

6a. Meteorology.—A continuation of Course 6, dealing with special topics, and a discussion of the results obtained at the meteorological observatory. *One hour a week recitation, † two hours a week.* Fall semester.

7. Optics.—Lectures and recitations in continuation of Course 1, based chiefly upon Edser's Light. Open to students who have taken Mathematics 8. *Three hours a week.* Spring semester of 1913-14 and alternate years.

8. Optics.—Advanced laboratory work in continuation of Course 5. ** Seven and one-half hours a week, or five hours a week.* Spring semester.

9. Mechanics and Heat.—Advanced laboratory work in continuation of Course 5. ** Seven and one-half hours a week, or five hours a week.* Fall semester.

10. Theory of Electricity and Magnetism.—Lectures and recitations on the mathematical theory of potential, capacity, and inductance, with applications to direct current phenomena. Hadley's Magnetism and Electricity for Students is used as a text-book. *Three hours a week.* Fall semester of 1912-13 and alternate years.

11. Electrical Measurements.—Advanced laboratory work in continuation of Course 5. ** Seven and one-half hours a week.* Fall semester.

12. Theory of Electricity and Magnetism.—Continuation of Course 10, with applications to alternating current phenomena. *Three hours a week.* Spring semester of 1912-13 and alternate years.

13a. Heat.—An advanced course in heat in continuation of Course 2. The text-book is Edser's Heat. *Three hours a week.* Given in the fall semester of 1913-14 and alternate years.

13b. Heat.—A continuation of 13a. Given in the spring semester of 1913-14 and alternate years. *Three hours a week.*

14. Mathematical Physics.—The application of mathematical methods to the treatment of problems in physics. The text-book is Mellor's Higher Mathematics. *Two hours a week.* Spring semester of 1912-13 and alternate years.

15. Special Laboratory Course.—A course open to students who have completed Courses 8, 9, and 11. A subject is assigned for original investigation, or the work of a published research is repeated. * *Five hours a week.* Fall semester.

16. Special Laboratory Course.—A continuation of Course 15. * *Seven and one-half hours a week.* Spring semester.

17. Radiation.—This course will include lectures and outside reading on the following topics: the electromagnetic theory of light; the development of Maxwell's equations; the application of Maxwell's equations to the reflection, refraction, and polarization of light, the radiation and absorption of a theoretical black body; the theories of emission and absorption; electric waves and light pressure. *Two hours a week.* Fall semester 1912-13 and alternate years.

18. Electricity and Optics.—Advanced laboratory work in continuation of Course 5. * *Five hours a week.* Fall semester.

19. Least Squares.—A course of lectures covering the more important topics treated in this subject. Required of juniors in Civil Engineering and elective for others who have taken Physics 1 and 2 and Mathematics 8. *One hour a week.* Fall semester.

Summer Term

Professor Stevens; Associate Professor Woodman

1. An Elementary Course.—This includes the list of experiments adopted by the Maine colleges for admission in physics.

2. Advanced Laboratory Course.—Work in any laboratory course offered in the University may be taken by students in the Summer Term who are properly qualified.

3. College Physics.—A course based upon those parts of the text-book in physics which treat of mechanics, light, and sound. This course may be taken for credit only by students who have pursued the subject for a regular semester at the University.

4. College Physics.—A course based upon those parts of the text-book in physics which treat of electricity and heat. This course may be taken for credit only by students who have pursued the subject for a regular semester at the University.

5. High School Physics.—A rapid survey of the ground covered in high school, based upon Millikan and Gale's text-book. This course is designed to meet the needs of teachers in high schools and it may be taken as a rapid review by students who have covered the ground in high school but have failed to pass college entrance examinations.

ROMANCE LANGUAGES

Professor Segall; Associate Professor Raggio

French

1. Elementary French.—Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation. *Five hours a week.* Fall semester.

2. Elementary French.—A continuation of Course 1. Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation; Rambeau, French Reader; Newson's First French Book; Bruno, Le tour de la France. *Five hours a week.* Spring semester.

3a. Intermediate French.—Fraser and Squair, Abridged French Grammar; Lamartine, Histoire des Girondins (selections). About 250 pages of collateral reading will be assigned. Open to students who have taken Courses 1 and 2, or an equivalent. *Three hours a week.* Fall semester.

3b. Intermediate French.—A continuation of Course 3a. Fraser and Squair, Abridged French Grammar; Sand, La Mare au Diable. About 175 pages of collateral reading will be assigned. *Two hours a week.* Spring semester.

4a. Advanced French.—Anatole France, le Crime de Sylvestre Bonnard; collateral reading; composition. Open to students who have taken Courses 3a and 3b, or an equivalent. *Three hours a week.* Fall semester.

4b. Advanced French.—A continuation of Course 4a. Pierre Loti, Pêcheur d'Islande; Edmond About, le Roi des montagnes; collateral reading; composition. *Two hours a week.* Spring semester.

5a. Elementary French Composition and Conversation.—Open to students who have taken Courses 1 and 2, or an equivalent. *Two hours a week.* Fall semester.

5b. Elementary French Composition and Conversation.—A continuation of Courses 5a. *Two hours a week.* Spring semester.

6a. Introduction to the History of French Literature.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Three hours a week.* Fall semester. Given in 1914-15.

6b. Introduction to the History of French Literature.—A continuation of Course 6a. *Two hours a week.* Spring semester. Given in 1914-15.

7a. Advanced French Composition and Conversation.—Open to students who have taken Courses 5a and 5b, or an equivalent. *Two hours a week.* Fall semester.

7b. Advanced French Composition and Conversation.—A continuation of course 7a. *Two hours a week.* Spring semester.

12a. French Literature in the Eighteenth Century.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Three hours a week.* Fall semester. Given in 1912-13.

12b. French Literature in the Eighteenth Century.—A continuation of Course 12a. *Two hours a week.* Spring semester. Given in 1912-13.

13a. French Literature in the Nineteenth Century.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Three hours a week.* Fall semester. Given in 1913-14.

13b. French Literature in the Ninteenth Century.—A continuation of Course 12a. *Two hours a week.* Spring semester. Given in 1913-14.

Spanish

9a. Elementary Spanish.—Hills and Ford, A Spanish Grammar. *Three hours a week.* Fall semester.

9b. Elementary Spanish.—A continuation of Course 9a. Hills and Ford, A Spanish Grammar; Ramsey, An Elementary Spanish Reader; Dent's First Spanish Book. *Two hours a week.* Spring semester.

10a. Intermediate Spanish.—Hills and Ford, A Spanish Grammar; Pérez Escrich, Fortuna; Alarcón, El Capitán Veneno; Moratín, El sí de las niñas. About 250 pages of collateral reading will be assigned. Open to students who have taken Courses 9a and 9b, or an equivalent. *Three hours a week.* Fall semester.

10b. Intermediate Spanish.—A continuation of Course 10a. Pereda, Pedro Sánchez. About 175 pages of collateral reading will be assigned. *Two hours a week.* Spring semester.

Italian

11a. Elementary Italian.—Sauer, Italian Conversation-Grammar; Bowen, First Italian Readings. *Three hours a week.* Fall semester.

11b. Elementary Italian.—A continuation of Course 11a. Sauer, Italian Conversation-Grammar; Manzoni, I Promessi Sposi. *Two hours a week.* Spring semester.

14a. Italian Classical Literature.—In this course the whole of Dante's Inferno and parts of the Purgatorio and Paradiso, will be translated. Selections from Pulci's Morgante, Boiardo's Orlando Innamorato, Ariosto's Orlando Furioso, and Tasso's Gerusalemme li-

berata will also be studied. The following texts will be used: D'Ancona and Bacci's Manuale della letteratura italiana, Vol. II (Firenze, Barbara); Ferrari's edition of Tasso's Gerusalemme liberata (Firenze, Sansoni); Scartazzini's edition of Dante's La Divina Commedia (Milano, Hoepli). The following books will be read as collateral reading: Snell's Primer of Italian Literature (Oxford, Clarendon Press); Gardner's Dante (London, J. M. Dent & Co.). Open to students who have taken Courses 11a and 11b or an equivalent. *Three hours a week.* Fall semester. (Not given in 1912-13).

14b. Italian Classical Literature.—A continuation of Course 14a. Scartazzini's edition of Dante's La Divina Commedia (Milano, Hoepli); Snell's Primer of Italian Literature (Oxford, Clarendon Press); Gardner's Dante (London, J. M. Dent & Co.) *Two hours a week.* Spring semester. Not given in 1912-13.

Romance Philology

15a. Old French.—This course is intended for students who wish to acquire a reading knowledge of Old French. The laws governing the development of Popular Latin to French will also be studied. The books used will be Bourciez' Phonétique française (Paris, Klincksieck); Paris's Extraits de la Chanson de Roland (Hachette et Cie); Clédat's edition of the Chanson de Roland (Garnier frères). Students will be expected to read outside the class during the fall and spring semesters Paris's La littérature française au moyen âge (Hachette et Cie). *Three hours a week.* Fall semester.

15b. Old French.—A continuation of Course 15a. Suchier's edition of Aucassin et Nicolette (Paderborn, Schöningh); Paris and Langlois' Chrestomathie du moyen âge (Hachette et Cie). *Two hours a week.* Spring semester.

Summer Term

Professor Segall; Associate Professor Raggio

1a. Elementary Course.*—This course is intended for beginners. The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 1-73.

1b. Continuation of Course 1a.†—The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 73-128; Rambeau's French Reader (Henry Holt & Co.).

1c. Continuation of Course 1b.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 337-344; Rambeau's French Reader (Henry Holt & Co.).

2. Intermediate Course.—This course is intended for those who have already the required number of points for entrance French, and who wish a course in French that may be counted towards a bachelor's degree. The text-books used will be Augier and Sandeau, le Gendre de M. Poirier (American Book Co.); France, le Livre de mon ami (Henry Holt & Co.); Gasc's Concise Dictionary of the French and English Languages (Henry Holt & Co.), or Clifton & McLaughlin's New Dictionary of the French and English Language (Wm. R. Jenkins Co.) Students should bring with them their grammars.

3. Elementary French Composition and Conversation.—Open to students who have taken Courses 1a, 1b and 1c, or an equivalent.

4. Advanced French Composition and Conversation.—Open to those who have taken Course 3 or an equivalent.

---

* The requirements for entrance French may be met by taking Courses 1a, 1b, and 1c on consecutive years.

† Students who already have one of the two units required for entrance French may complete their requirements during one Summer Term by taking Courses 1b and 1c.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

WILLIAM EMANUEL WALZ, A. M., LL. B., Litt. D.
Dean *Professor of Law*

EDGAR MYRICK SIMPSON, A. B. *Professor of Law*

GEORGE HENRY WORSTER, LL. M. *Associate Professor of Law*

BARTLETT BROOKS, A. B., LL. B. *Assistant Professor of Law*

EVERETT HARLOW BOWEN, A. B., LL. B.
Instructor in Common Law Pleading

LUCILIUS ALONZO EMERY, A. M., LL. D., Ex-Chief Justice of the Supreme Judicial Court of Maine
Lecturer on Roman Law and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D., Member of the Massachusetts Bar and of the United States Supreme Court Bar
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
Lecturer on Admiralty Law

ISAAC WATSON DYER, A. B.
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

JOHN ROGERS MASON, A. M. LL. B.
Lecturer on Bankruptcy Law

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies the Isaac H. Merrill building, purchased by the University in 1911, corner Union and State Streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains over 3,500 volumes, including the reports of the Federal Courts and of the Supreme Courts of the United States, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the complete National Reporter System, the Lawyers' Reports Annotated, all the important law encyclopædias, and a considerable number of text-books, as also the English Reports, full verbatum reprint, the English Ruling Cases, and the American Digest.

Admission

The College of Law admits college graduates and such graduates of secondary institutions as are able to fulfill the general admission requirements of the University described on page 49.

Intended Increase of Entrance Requirements

In harmony with the greater demands made by the legal profession and the public, and in recognition of the fact that university standards throughout the country are being gradually raised, it is intended in course of time to go beyond these requirements, and, in addition to the high school education prescribed, two years college work may be required as a preliminary preparation of all candidates for the law degree.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other law schools of good standing are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices otherwise qualified are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the curriculum.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, on presentation of their certificates of admission to the bar at the beginning of the fall term, while graduate students may take the curriculum leading to the degree of Master of Laws.

Methods of Instruction

The College is not committed exclusively to any one method of instruction. It recognizes the great value of lectures by able men, and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle" may, perhaps, adequately indicate the standpoint of the College in the matter of method.

Particular stress is placed upon the practice court, which is held once a week as a part of the work of the College, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorities cited, are submitted to the presiding judge.

The aim and spirit of the College are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Curriculum

The curriculum covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. It is believed that expenses in this College are lower than in any other New England University.

Degrees

At the completion of the three years curriculum the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence including the presentation of a satisfactory thesis and examination at the College the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the curriculum leading to the Master's degree.

COURSES OF INSTRUCTION

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Agency.—Text-book, Huffcut's Cases on Agency. *Three hours a week.* Spring term. Associate Professor Worster.

3. Bankruptcy.—Lectures. *Two hours a week.* Winter term. Mr. Mason.

4. Brief Making and the Use of Law Books.—Text-book, Brief Making and the Use of Law Books. *One hour a week.* Fall term. Professor Walz.

5. Carriers.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

6. Carriers.—A continuations of Course 5. *Three hours a week.* Winter term. Professor Simpson.

7. Common Law Pleadings.—Lectures. *Two hours a week.* Winter term. Mr. E. H. Bowen.

8. Common Law Pleading.—A continuation of course 7. *One hour a week.* Spring term. Mr. E. H. Bowen.

9. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

10. Constitutional Law.—Boyd's Cases. *Two hours a week.* Spring term. Associate Professor Worster.

11. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Assistant Professor Brooks.

12. Contracts.—A continuation of course 11. *Three hours a week.* Winter term. Assistant Professor Brooks.

13. Contracts.—A continuation of course 12. *Two hours a week.* Spring term. Assistant Professor Brooks.

14. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

15. Criminal Law.—A continuation of course 14. *Three hours a week.* Spring term. Professor Simpson.

16. Cross-Examination.—Lectures. Mr. ————

17. Damages.—Beale's Cases on Damages. *Three hours a week.* Winter term. Associate Professor Worster.

18. Domestic Relations.—Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

19. Equity Jurisprudence.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz.

20. Equity Jurisprudence.—A continuation of course 19. *Three hours a week.* Winter term. Professor Walz.

21. Equity Pleading.—Shipman on Equity Pleading. *Two hours a week.* Spring term. Assistant Professor Brooks.

22. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

23. Evidence.—A continuation of course 22. *Three hours a week.* Winter term. Professor Simpson.

24. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

25. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

26. Federal Jurisdiction and Procedure.—Lectures. Mr. Dyer.

27. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

28. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

29. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

30. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

31. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

32. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

33. Legal Ethics.—Code of American Bar Association. *One hour a week.* Spring term. Professor Walz.

34. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Dunn.

35. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

36. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

37. Negotiable Paper.—Colson-Huffcut on Negotiable Paper. *Two hours a week.* Winter term. Assistant Professor Brooks.

38. Negotiable Paper.—A continuation of course 37. *Three hours a week.* Spring term. Assistant Professor Brooks.

39. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

40. Private Corporations.—Wilgus's Cases. *Four hours a week.* Fall term. Associate Professor Worster.

41. Private Corporations.—A continuation of course 40. *Three hours a week.* Winter term. Associate Professor Worster.

42. Private Corporations.—Lectures. Mr. Dyer.

43. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

44. Real Property.—Tiffany on Real Property. *Four hours a week* Fall term. Professor Simpson.

45. Real Property.—A continuation of course 44. *Three hours a week.* Winter term. Professor Simpson.

46. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

47. Roman Law.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

48. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Associate Professor Worcester.

49. Sales.—A continuation of course 48. *Two hours a week.* Winter term. Associate Professor Worster.

50. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Associate Professor Worster.

51. Suretyship.—A continuation of course 50. *Two hours a week.* Winter term. Associate Professor Worster.

52. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

53. Torts.—A continuation of course 52. *Three hours a week.* Winter term. Professor Walz.

54. Torts.—A continuation of course 53. *Two hours a week.* Spring term. Professor Walz.

55. What to do in Court.—Lectures. *About ten hours.* Fall or spring term. Ex-Chief Justice Emery.

56. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

THE COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

HAROLD SHERBURNE BOARDMAN, C. E.
Professor of Civil Engineering
DEAN

WILBUR FISKE JACKMAN, B. S., PH. C. *Professor of Pharmacy*

ARTHUR CRAWFORD JEWETT, S. B.
Professor of Mechanical Engineering

CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing

CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering

RALPH HARPER McKEE, PH. D. *Professor of Chemistry*

WILLIAM EDWARD BARROWS, E. E.
Professor of Electrical Engineering

CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry

PAUL LEONARD BEAN, B. S.
Associate Professor of Civil Engineering

ALBERT THEODORE CHILDS, B. S., E. E.
Associate Professor of Electrical Engineering

WINSLOW HOBART HERSCHEL, A. B.
Associate Professor of Mechanical Engineering

ARCHER LEWIS GROVER, B. S. *Assistant Professor of Drawing*

LLOYD MEEKS BURGHART, M. A.
Assistant Professor of Chemistry

JULIUS ERNEST KAULFUSS, B. S.
Assistant Professor of Civil Engineering

EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*

CHARLES JENKINS CARTER *Instructor in Machine Tool Work*

ALBERT GUY DURGIN, M. S. — *Instructor in Chemistry*
WALTER ELWOOD FARNHAM — *Instructor in Drawing*
*ERNEST CONANT CHESWELL — *Instructor in Electrical Engineering*
CARL HENRY LEKBERG, B. S. — *Instructor in Mechanical Engineering*
EARLE OVANDO WHITTIER, B. S. — *Instructor in Chemistry*
WEBSTER NEWTON JONES, M. A. — *Instructor in Industrial Chemistry*
ALPHEUS CROSBY LYON, B. S. — *Instructor in Civil Engineering*
CHARLES ANSON NASH, B. S. — *Instructor in Electrical Engineering*
BENJAMIN CALVIN KENT, B. S. — *Tutor in Mechanical Engineering*

*Absent on leave from Sept. 1, 1912, to Sept. 1, 1913

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, in various branches of engineering, and in pharmacy. The number of hours required for graduation in this college is one hundred and fifty. In such technical curricula it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the curricula described below is given a tabulated statement of the subjects pursued and the amount of work required. The College comprises

Chemical Engineering Curriculum
Chemistry Curriculum
Civil Engineering Curriculum
Electrical Engineering Curriculum
Mechanical Engineering Curriculum
Pharmacy Curriculum

At graduation in any of these curricula the student receives the degree of Bachelor of Science. The diploma indicates which curriculum has been completed.

Chemical Engineering Curriculum

In view of the rapid development of the application of chemistry in manufacturing, this curriculum is offered to furnish training in engi-

neering together with specialization in chemistry. The first two years are almost identical with those under the chemical curriculum, but in the junior and senior years the student takes the fundamental courses in mechanical and electrical engineering, where, in the other curriculum, the student takes subjects having a biological aspect. The training is thus essentially chemical, and the graduates are primarily chemists having a good knowledge of mechanical and electrical engineering. Such students will be prepared to enter the profession of chemical engineering and as such occupy positions in the manufacturing establishments which involve chemical processes, such, for example, as metallurgical works, bleacheries, dye houses, chemical plants, gas works, sugar refineries, pulp and paper mills, etc.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
German 1a or French 3a	3	German 1b or French 3b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
English 1a[1]	1	Chemistry 7, 3 and †4	5
Mathematics 22	3	English 1b[1]	1
Mechanical Engineering 1b, *4	1½	Military 1, *3	1
Military 1, *3	1	Modern Language	2
Modern language	3	Physics 2	3
Physics 1	5	Physics 5, *5	2
	19½		19

JUNIOR YEAR

Chemistry 8	3	Chemistry 32b	2
Chemistry 18, †8	4	Chemistry 19, †8	4
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 9, †4	2	Chemistry 13, †3	1½
Chemistry 29a	2	Mechanical Engineering 10	2
Mechanical Engineering 26, †3	1½	Mechanical Engineering 2, *4	1½
Physics 11, *7½	3	Electrical Engineering 10b	2
		Elective	3
	18½		19

SENIOR YEAR

Chemistry 24a	2	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 12, †6	3	Chemistry 28, †2	1
Chemistry 33 or Geology 6	2	Chemistry 29b	2
		Chemistry 25, †8	4
Electrical Engineering 10a	3	Elective	3
Electrical Engineering 11a, †4	2		17
Elective	2		
	17		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Chemical Engineer.

Chemistry Curriculum

This curriculum is designed to give the student not only a thorough technical training, but also the broadness of education which will enable him readily to undertake the great variety of problems which naturally present themselves to a chemist. It differs from the chemical engineering curriculum in that in the last two years the student takes courses having a biological aspect (bacteriology, biological chemistry, and agricultural analysis) rather than those of an engineering type.

The curriculum is a broad one and when completed it prepares the
The curriculum is a broad one and, when completed, it prepares the student to teach, or for the profession of chemist in experiment stations, food laboratories, chemical, fertilizer and tanning plants; metallurgical, rubber and electrical machinery manufactories; and the general consulting and analytical work of a professional chemist.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, ‡ 4	2	Chemistry 4, † 4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Chemistry 14, † 10	5	Chemistry 16, † 10	5
Chemistry 9, † 4	2	Chemistry 7, 3 and † 4	5
English 1a[1]	1	English 1b[1]	1
Mathematics 22a	3	Modern Language	2
Modern Language	3	Military 1, *3	1
Military 1, *3	1	Physics 2	3
Physics 1	5	Physics 5, *5	2
	20		19

JUNIOR YEAR

Biological Chemistry 1	5	Agricultural Chemistry 4, † 10	5
Chemistry 8	3	Bacteriology 1, † 6	3
Chemistry 32a	3	Chemistry 26, † 6	3
Chemistry 29a	2	Chemistry 32b	2
Chemistry 18, † 8	4	Modern Language	2
Modern Language	3	Elective	4
	20		19

SENIOR YEAR

Chemistry 12, †6	3	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 24a	2	Chemistry 29b	2
Chemistry 19, †8	4	Chemistry 28, †2	1
Chemistry 33 or Geology 6	2	Chemistry 25, †8	4
Elective	3	Elective	3
	17		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis, and proofs of professional work, he may receive the degree of Chemical Engineer.

Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college curriculum to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The attention of the student is directed to the fact that the scope of civil engineering is so broad that he may never expect to become expert in all of its branches, and that on the completion of his curriculum he should obtain employment in that branch for which he seems best adapted.

It is impressed upon his mind that the granting of his bachelor's degree does not make him an engineer. It simply indicates that he has received the technical mental training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice and

with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and those engaged in practical work. These lectures tend to increase the interest of the student and to bring him in touch with men outside of his own institution.

Wingate Hall, in which the department of Civil Engineering is located, contains recitation rooms, designing rooms, testing laboratories, drawing rooms, instrument rooms, and a filing and reference room, and is well equipped with apparatus.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. In the spring semester of the third year the student is required to choose between two optional lines of study. Option 1 consists of work in hydraulic engineering, while Option 2 consists of work in railroad engineering. The time devoted to each option is the same. Owing to the available facilities of the department, not more than sixty per cent of the number of students in a class are allowed to select either option. A written statement is required from each student before the close of the fall semester giving his reasons for his selection. The head of the department reserves the right to make the final decision.

The following outline constitutes the regular four years curriculum. Certain general subjects which are given as requirements may, on presentation of reasons satisfactory to the head of the department, be omitted and others substituted.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Civil Engineering 1a, 2a	2½	Civil Engineering 2b, 2c	2
Drawing 3, *6	2	Civil Engineering 3a, 4a	3
English 1a[1]	1	Drawing 4, *6	2
Mathematics 7	5	English 1b[1]	1
Military 1, *3	1	Mathematics 8	5
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19½	Physics 2	3
		Physics 5, *5	2
			21

JUNIOR YEAR

Civil Engineering 3b	1	Civil Engineering 6, *6	2
Civil Engineering 4b, 4c, *6	2	Civil Engineering 9a	1
Civil Engineering 5	2	Civil Engineering 8 or Civil Engineering 19	2
Economics 1a	2	Civil Engineering 10	3
Geology 6	2	Civil Engineering 21	2
Mechanics 5	5	Economics 2a	2
Mathematics 10	3	Mechanics 6	5
Physics 19	1	Mechanical Engineering 25, †2	1
† Physics 9, *2½	1		18
	19	** Civil Engineering 9b	2

SENIOR YEAR

Civil Engineering 12	3	Civil Engineering 13a	3
Civil Engineering 20	2	Civil Engineering 13b	2
Civil Engineering 14, †12	6	Civil Engineering 15, †6	3
Civil Engineering 16	2	Civil Engineering 17 and Civil Engineering 24 and 25b or Electrical Engineering 12b	4
Civil Engineering 25a or Civil Engineering 11a, †4	4		
Civil Engineering 11b, †2	1		
History 5	2	Civil Engineering 26, †2	1
	17	Economics 6	3
			16

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

Electrical Engineering Curriculum

This curriculum is intended to provide the student with a thorough understanding of the underlying principles of electrical engineering and to develop an ability to solve problems of an engineering nature from commercial as well as technical premises. To accomplish this, the student first studies the various electrical laws and methods of electrical measurements and correlates them with various laws previously assimilated in the study of physics and mathematics. These studies are followed by more advanced courses involving the fundamental electrical laws and theories and showing their application to the design, operation, and performance of electrical apparatus such as is used in the generation of electrical energy or in transforming electrical energy into mechanical energy for the various commercial requirements.

The methods of instruction consist of recitations, lectures, problems, laboratory tests, and drawing room work in design. It is the endeavor of the curriculum to acquaint the student with contempory engineering practice and, by persistent association of abstract analysis with practical problems, to equip him with the fundamentals of a successful career. Stress is laid upon the systematic reading of technical periodicals and the acquirement of a reference library. Effort is made to have lectures by active engineers and alumni following their profession, thus bringing the student into more intimate contact with the engineering world.

In addition to the purely electrical subjects, the student takes the customary work in mathmatics, physics, mechanics, shop, drawing, and allied engineering courses, together with the cultural subjects enumerated below.

Two options are offered in the junior and senior years, one of which is required for a degree.

** Taken after Commencement.

† By special arrangement, Physics 8, given in the spring semester, may be substituted for Physics 9.

Option 1 consists of

Ee 13b.	Electrical Railway Engineering	2
Ee 14a.	Illuminating Engineering	2
Ee 15b.	Telephone Engineering	2

Option 2 consists of

Ps 10.	Theory of Electricity and Magnetism	3
Ps 12.	Theory of Electricity and Magnetism	3

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible, and consists essentially of a 20 kilowatt electrical substation, converting from a three phase, 60 cycle, 115 volt, alternating current system, to direct current, by means of rotary converters and belted alternating current motors driving direct current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressure for experimental work, and voltages for operating two and three-phase rotary converters, a self-starting rotary converter, a three-phase generator, a three-phase revolving field synchronous motor, a three phase variable speed induction motor, a single-phase synchronous motor, a single-phase self-starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1b, *4	1½	Mechanical Engineering 2, *4	1½
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	18½	Physics 5, *5	2
			20½

JUNIOR YEAR

Elctrical Enginering 1a	3	Electrical Engineering 1b	3
Mechanical Engineering 5b, *4	1½	Electrical Engineering 2b, †3	1½
Civil Engineering 1b and 2a	2½	Mechanical Engineering 5b, *4	1½
Mechanics 5	5	Mechanical Engineering 8	3
Physics 11, *7½	3	Mechanical Engineering 10	2
Economics 1a	2	Mechanics 6	5
Electrical Engineering 14a, or Theory of Electricity and Magnetism Ps 10	2	Economics 2a	2
		Electrical Engineering 15b, or Theory of Electricity and Magnetism Ps 12	2
	19		20

SENIOR YEAR

Electrical Engineering 3a	3	Electrical Engineering 3b	2
Electrical Engineering 4a	2	Electrical Engineering 7b	2
Electrical Engineering 5a, †4	2	Electrical Engineering 6b, †4	2
Electrical Engineering 6a, †4	2	Electrical Engineering 8b, *4	1½
Mechanical Engineering 26, †3	1½	Electrical Engineering 4b	1
Mechanical Engineering 11	3	Electrical Engineering 13b, or Theory of Electricity and Magnetism Ps 12	2
Civil Engineering 23	2		
Civil Engineering 22	1		
	16½	Electrical Engineering 16b	2
		Mechanical Engineering 19, *4	1½
		Economics 6	3
			14

At graduation the students receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all works involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power; and equipment of railways, and similar work.

The Mechanical Engineering curriculum is arranged to fit men as well as possible in four years' time to enter any of these lines of work. It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught mainly by recitation based upon carefully chosen texts which is supplemented or brought down to date, where necessary, by explanations or illustrative examples on the part of the instructor. Numerous problems are assigned for work outside the class-room to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation, and testing of apparatus by direct contact with it. In the drawing rooms application of theories to work in design is taught, together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice

in the electrical laboratory. Sufficient time is devoted to recitation and field work in surveying to give familiarity with instruments and methods. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

Of the one hundred and fifty semester hours required for graduation thirty-three are devoted to instruction in English composition and literature, modern language, economics, business law, and history. Opportunity to take additional work along general lines is offered and recommended to those who can readily carry it.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1a, *6	2	Mechanical Engineering 2, *4	1½
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19	Physics 2	3
		Physics 5, *5	2
			20½

JUNIOR YEAR

Mechanical Engineering 24...	1	Mechanical Engineering 5a, *6	2
Mechanical Engineering 5a, *6	2	Mechanical Engineering 8....	3
Mechanical Engineering 9....	2	Mechanical Engineering 10...	2
Mechanical Engineering 3, *4	1½	Mechanical Engineering 15a,	
Civil Engineering 1b	2	†2	1
Civil Engineering 2a	½	** Mechanical Engineering 19,	
Mechanics 5	5	*4	1½
Physics 9, *5.....	2	Electrical Engineering 10a....	2
Economics 1a	2	Mechanics 6	5
		** Economics 2a	2
	18		18½

SENIOR YEAR

Mechanical Engineering 11...	3	Mechanical Engineering 7....	2
Mechanical Engineering 12, *6	2	Mechanical Engineering 15c,	
Mechanical Engineering 15b,		†4	2
†2	1	Mechanical Engineering 16...	2
Mechanical Engineering 18, 66	2	Mechanical Engineering 17, *6	2
Civil Engineering 22	1	Mechanical Engineering 13...	2
Civil Engineering 23	2	Mechanical Engineering 20...	1
Electrical Engineering 10b....	2	* Economics 6	3
Electrical Engineering 11a, †4	2	Electrical Engineering 10c....	2
Elective	2	Electives	2½
	17		18½

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

Pharmacy Curricula

The Department of Pharmacy comprises two curricula, one of four years and one of two years.

** Substitution may be offered for this course if approved by the major instructor.

The four years curriculum is offered in response to a demand for a combined collegiate and technical training for those who design to practice pharmacy. It aims therefore to combine general culture studies with a training in those sciences fundamental to technical pharmacy, to the end that the pharmacist may be equipped culturally and technically amply to fulfill the increased demands and responsibilities of his exacting calling. Hence, while this curriculum includes the appropriate sciences and laboratory courses, it also includes cultural courses in modern languages, history, philosophy, and economics. While in the latter three subjects particular courses are not specified, a minimum number and proper sequence of such courses are required.

Those who intend to prepare for pharmaceutical work are urged to consider carefully the superior advantages of this curriculum. The increasing importance of the chemical, biological, and sanitary sciences, and of the pharmacist's relation to them, emphasized by the era of food and drug legislation now upon us, points out at once the path of new duty and of enlarged opportunity to those fitted to enter. To the unfit, the new duty remains, without the enlarged opporunity.

Instruction in pharmaceutical studies is given by lectures, recitations, and tests, supplemented by work in the laboratories of chemistry, biology, and pharmacy. Thirty credits are required for graduation.

The library contains valuable reference literature in chemistry, pharmacy, and allied sciences, and the leading scientific and technical journals.

Requirements for Graduation, Four Years Curriculum

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 3 and 3p	4	English 3 and 4	4
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 2	5	Mathematics 3 and 1	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	17½		18

SOPHOMORE YEAR

Biology 1	5	Biology 1	5
Chemistry 14, †8	4	Chemistry 7	5
English 1a[1]	1	English 1b[1]	1
Military 2, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	19		19

JUNIOR YEAR

Biological Chemistry 1	5	Bacteriology 1, †6	3
Chemistry 8	3	Bacteriology 2	1
Chemistry 16, †10	5	Chemistry 19d, †4	2
Pharmacy 5	2	Chemistry 19f, †2	1
Plant Histology 10	4	Chemistry 31	2
Electives	1	Lab. Biol. Chem. 2, †6	3
		Pharmacy 6	4
	20	Electives	4
			20

SENIOR YEAR

Pharmacy 2	5	Pharmacy 4	5
Pharmacy 3, †12	6	Pharmacy 9, †3	1½
Pharmacy 7	3	Pharmacy 10, †10	5
Elective	4	Pharmacy 11	3
		Elective	4
	18		18½

From courses in history, philosophy, and economics, a total of at least five hours must be chosen.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

Two Years Curriculum

This curriculum is designed for those who, for lack of time or for other reasons, are unable to take the curriculum of four years. The more general educational studies of the full curriculum are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The curriculum corresponds, in general, to the usual full curriculum of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this curriculum does not warrant extending to other than advanced students the privilege of electives.

Requirements for Graduation

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Botany 13	3
Chemistry 14, † 16	8	Chemistry 2	3
Pharmacy 1	5	Chemistry 7	5
Pharmacy 5	2	Chemistry 16, † 10	5
		Pharmacy 6	4
	17		20

SECOND YEAR

Chemistry 8	3	Bacteriology 1, † 6	3
Pharmaceut. Histol. 14	3	Chemistry 19f	1
Pharmacy 2	5	Chemistry 31	2
Pharmacy 3, † 12	6	Pharmacy 4	5
Pharmacy 7	3	Pharmacy 9, † 3	1½
		Pharmacy 10, † 10	5
	20	Pharmacy 11	3
			20½

Students who satisfactorily complete this curriculum receive the degree of Pharmaceutical Chemist.

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix of a star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation.

CHEMISTRY

PROFESSOR MCKEE; ASSOCIATE PROFESSOR EASLEY; ASSISTANT PROFESSOR BURGHART; MR. DURGIN; MR. WHITTIER; MR. W. N. JONES

1. GENERAL CHEMISTRY.—This course deals with the general principles of the science. Lectures and recitations. Open to all students. *Two hours a week.* Fall semester.

2. GENERAL CHEMISTRY.—This course is a continuation of Course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds, and chemical properties. Lectures and recitations. *Three hours a week.* Spring semester.

3. LABORATORY CHEMISTRY.—Laboratory work to accompany Course 1. † *Four hours a week.* Fall semester.

4. LABORATORY CHEMISTRY.—A continuation of Course 3 to accompany Course 2. † *Four hours a week.* Spring semester.

6. ORGANIC CHEMISTRY.—An elementary course giving in one semester a rapid view of the subject. Students who have sufficient time

available are advised to take Courses 7 and 8 instead of this course. No prerequisite other than general chemistry. *Three hours class room and † four hours laboratory work a week.* Spring semester.

7. Organic Chemistry.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory work. The text followed is Holleman's Text-book of Organic Chemistry. Jones's Laboratory Outline of Organic Chemistry is used for the experimental work. Open to those who have taken qualitative analysis (Course 14). *Three hours class room and † four hours laboratory work a week.* Spring semester.

8. Organic Chemistry.—A continuation of Course 7. The work is chiefly in the aromatic series. *Three hours a week.* Fall semester.

9. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils, and the common coals. † *Four hours a week.* Fall semester.

12. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. This course must be preceeded by Courses 7 and 8. † *Six hours a week.* Fall semester.

13. Descriptive Mineralogy.—The text-book is Moses and Parsons's Elements of Mineralogy. † *Three hours a week.* Spring semester.

14. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. † *Ten to † sixteen hours a week.* Fall semester.

15. Qualitative Analysis.—This course is similar to Course 14 but deals with organic compounds. It must be preceeded by Courses 7 and 8. Noyes and Mulliken's Class Reactions and Identification of Organic Substances is used as a guide. † *Four hours a week.* Fall semester.

16. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Foulk's Quantitative Chemical Analysis. Open to students who have had Course 14. † *Ten hours a week.* Fall semester.

18. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravimetric and volumetric methods are used. Open to students who have taken Course 16. † *Eight hours a week.* Fall semester.

19. Special Quantitative Methods.—Open to students who have completed Course 16. (a) Water analysis; (b) electroanalysis; (c) assaying; (d) special volumetric analysis; (e) organic analysis; (f) toxicology and urinalysis. Subdivisions a, b, c, and d each require † *four hours a week.* Subdivisions e and f each require † *two hours a week.* Fall and spring semesters.

22. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than* † *ten hours a week* for its completion. Spring semester.

23. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. Open to students who have completed Courses 7 and 8. *Three hours a week.* Fall semester.

24a. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. Open to students who have Completed Courses 7, 8, 14, and 16. *Two hours a week.* Fall semester.

24b. Industrial Chemistry.—A continuation of Course 24a. *Two hours a week.* Spring semester.

25. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed Courses 16 and 18. † *Eight hours a week.* Spring semester.

26. Physical-Chemical Methods.—The course will include: determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as the refractometer, polariscope, and spectroscope. † *Six hours a week.* Spring semester.

28. Dyeing.—The practical application of dyes to cotton, wool, and silk. † *Fifteen hours a week* for two weeks.

29a. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, properties, and alloys of iron. Open to students who have completed Courses 1, 2, 3, and 4. *Two hours per week.* Fall semester.

29b. Metallurgy of the Metals other than Iron.—A course similar to 29a. The metals other than iron and steel are studied. Open to students who have completed Course 14. *Two hours a week.* Spring semester.

31. Chemical Reactions.—Principles governing chemical reactions; their application to equations; oxidation and reduction. *Two hours a week.* Spring semester.

32a. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures and recitations. Open to students who have completed Ch. 16, Ms. 22, and Ps. 1, 2, and 5. *Three hours a week.* Fall semester.

32b. Physical Chemistry.—A continuation of Course 32a. *Two hours a week.* Spring semester.

33. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. Open to students who have completed Courses 32a and 32b. *Two hours a week.* Fall semester.

Laboratory fees covering general chemicals, gas, etc., are as follows: Courses 3, 4, 14, 16, and 22, $5; Courses 6, 7, 12, and 18, $3; Courses 13, 15, 25, 26, 28, and each part of 19, $2.

Broken apparatus and special chemicals are paid for at the chemical supply room by use of a "breakage card" obtained from the university cashier. The portion of this card which has not been used will be redeemed at the end of the semester by the Cashier.

For courses in biological and agricultural chemistry see the description of courses given by the department of Biological and Agricultural Chemistry.

Summer Term

Professor McKee; Associate Professor Easley; Assistant Professor Burghart

1. General Inorganic Chemistry.—A review of the class-room work of the freshman year. Experimental lectures and recitations.

2. Inorganic Preparations.—A laboratory course in the purification and preparation of typical inorganic compounds. *Ten hours of laboratory work a week.*

3. Methods of Laboratory Manipulation.—Glass bending, blowing, cutting, boring and annealing; sealing of wires into glass and repair of glass apparatus; soldering of the more common metals; methods of labeling; stains, varnishes, and lacquers for wood and metal apparatus; setting up of apparatus. *Six hours of laboratory work a week.*

4. Physical Chemistry.—Lectures on selected chapters of the subject touching upon the following phases: molecular structure, the mass law, the theories of solution and their applications, especially along the line of electro-chemistry. Given in 1913.

5. Organic Chemistry.—This is a general introductory course in the subject open to those who have had the freshman course in general chemistry or its equivalent.

6. Laboratory work in general, analytic, and organic chemistry will be arranged according to the needs of those attending the Summer Term.

Attention should be called to the courses that can be taken as graduate work by those who already have a bachelor's degree. It is the intention of the department to vary from year to year the courses offered so that a student attending several successive summers will be able to take a considerable variety of chemical courses.

CIVIL ENGINEERING

Professor Boardman; Professor Brown; Associate Professor Bean; Assistant Professor Kaulfuss; Mr. Lyon

1a. Plane Surveying.—A course on the general principles of plane surveying; instruments, their adjustments and uses; the variation of the magnetic needle and the determination of the true north; direct leveling; land survey computations. The text-book used is Breed and Hosmer's Principles and Practice of Surveying, Vol. I. *Three hours a week.* Last nine weeks. Fall semester.

1b. Plane Surveying.—A course similar to 1a, given to students in the Mechanical and Electrical Engineering curricula. *Two hours a week.* Fall semester.

2a. Field Work in Surveying.—The use of the chain, compass, transit, and level. This course is given before the student has received class-room instruction, and is designed to make him familiar with the uses of the instruments, such as running lines, turning angles, reading verniers and rods, etc. **Six hours a week.* First nine weeks. Fall semester.

2b. Plotting.—This course consists chiefly of map drawing from field notes, by the different methods in common use. Course 2a is prerequisite. **Four hours a week.* First twelve weeks. Spring semester.

2c. Field Work in Surveying.—A continuation of Course 2a. This course consists of original surveys, problem work, adjustment of instruments, note keeping, etc. The text-book used is Pence and Ketchum's Surveying Manual. Course 2a is prerequisite. **Six hours a week.* Last six weeks. Spring semester.

3a. Railroad Curves.—The geometry of railroad curves, switches and turnouts. The text-book used is Allen's Railroad Curves and Earthwork, together with Field and Office Tables by the same author. Course 1a or 1b is prerequisite. *Three hours a week.* First twelve weeks. Spring semester.

3b. Earthwork.—Recitations and lectures on the various methods of setting slope stakes and of calculating earthwork. Course 3a is prerequisite. *One hour a week.* Fall semester.

4a. Railroad Field Work.—This course consists of practice in running in railroad curves and turnouts. A general application of the theories of Course 3a. Courses 2a and 3a are prerequisite. † *Six hours a week.* Last six weeks. Spring semester.

4b. Railroad Field Work. The survey of a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. Courses 2c, 3a, and 4a, or Courses 2c and 27 are prerequisite. * *Six hours a week.* First nine weeks. Fall semester.

4c. Railroad Office Work.—The office work of mapping the notes taken in Course 4b, including the calculation of the earth work. Courses 2b and 4b are prerequisite. * *Six hours a week.* Last nine weeks. Fall semester.

5. Highway Engineering.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic; the construction and maintenance of the different pavements on city streets. Lectures and recitations. (Course 1a or 1b is prerequisite). *Two hours a week.* Fall semester.

6. Drawing.—This course includes topographical drawing, lettering and tracing; stereotomy, giving the application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, abutments, bridge piers, etc. * *Six hours a week.* Spring semester.

7. Thesis Work.—The result of some original investigation, or design. *Time to be arranged.* See regulations regarding degrees.

8. Sanitary Engineering.—Sewerage systems; drainage and sewerage of towns; sewage disposal; sewage treatment; water purification; sanitation and the public health. Required of students electing Option 1. Course 1a or 1b is prerequisite. *Two hours a week.* Spring semester.

9a. Advanced Surveying.—This course consists of lectures and readings on the theory of base line measurement, triangulation, precise leveling, topographical surveying, and the use of the plane table, and is

a preparation for Course 9b. The text-book is Breed and Hosmer's Principles and Practice of Surveying, Vol. II. Course 4b is prerequisite. *One hour a week.* Spring semester.

9b. Advanced Surveying.—This course consists of the practical application in the field of the principles given in Course 9a. The work is given during the two weeks following Commencement. Course 9a is prerequisite.

10. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observation; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. The text-book used is Russell's Hydraulics. *Three hours a week.* Spring semester.

11a. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter. Trips are made to the United States Geological Survey gaging station, located on the Penobscot River between Howland and West Enfield, where discharge measurements are made. The data thus obtained is used, together with that obtained from the Survey, to plot the rating curve, etc. The measurements taken are reported to the Survey. The expenses of this course are paid by the students. Required of students taking Option 1. Course 10 is prerequisite. † *Four hours a week.* Fall semester.

11b. Hydraulic Field Work.—A short course similar to Course 11a. Required of students taking Option 2. Course 10 is prerequisite. † *Two hours a week.* Fall semester.

12. Structures.—A continuation of Course 21. The theory of stresses in framed structures, including the plate girder, bridge trusses, and roof trusses; reinforced concrete; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.* Fall semester.

13a. Structures.—A continuation of Course 12. This course includes a study of the higher types of structures. *Three hours a week.* Spring semester.

13b. Graphic Statics.—This course consists of class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by the graphical method. Course 12 is prerequisite. *Two hours a week.* Spring semester.

14. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. Course 21 is prerequisite. † *Twelve hours a week.* Fall semester.

15. Designing.—A continuation of Course 14. Course 12 is prerequisite. † *Six hours a week.* Spring semester.

16. Hydraulic Engineering.—Rainfall, evaporation, and stream flow; the development and utilization of water power; the development of the modern turbine. This course is given by lectures and recitations. Required of students electing Option 1. Course 10 is prerequisite. *Two hours a week.* Fall semester.

17. Hydraulic Engineering.—A continuation of Course 16. Course 11a is prerequisite. *Two hours a week.* Spring semester.

19. Railroad Engineering.—Lectures and recitations on the methods and materials of railroad construction. Subgrade; roadbed; trestles; culverts; track; street crossings; yards and terminals, signals and interlocking; track work and maintenance. Required of students electing Option 2. Courses 3b and 4b are prerequisite. *Two hours a week.* Spring semester.

20. Masonry Construction.—A course including the discussion of building stone, cements and their tests, mortar, concrete, piles, foundations, pneumatic caissons, open caissons, bridge piers, and abutments. Lectures and recitations. The text-book used is Baker's Treatise on Masonry Construction. *Two hours a week.* Fall semester.

21. Structures.—The theory of the simple beam; loads and reactions; vertical shear; bending moment; influence lines. The object of this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, various tables, and the slide rule. The text-book used is Grover and Boardman's Notes on Beams and Simple Framed Structures. *Two hours a week.* Spring semester.

22. Foundations.—Building stones; manufacture of cement; tests of cement; mortar; concrete, both plain and reinforced. This is a course of lectures given to students in the Mechanical and Electrical Engineering curricula. *One hour a week.* Fall semester.

23. Hydraulics.—A short course which includes the main principles given in Course 10. Given to students in the Mechanical and Electrical Engineering curricula. The text-book is the same as that used in Course 10. *Two hours a week.* Fall semester.

24. Railroad Engineering.—A course in railroad design. A map reconnaissance for a railroad about twelve to fifteen miles in length is made, applying the theories of Course 25a. The final line is located, profile made, grades established, and drainage areas and culverts calculated. The rails, switch points, frogs, and ties for a turnout are designed. A railroad yard layout is computed and plotted. Required of students electing Option 2. Courses 4c and 25a are prerequisite. † *Six hours a week.* Spring semester.

25a. Railroad Engineering.—A course discussing the economics of railroad location and operation. The railroad corporation, its rights and limitations; traffic; operating expenses; the locomotive and its work; distance; curves; grades. Required of students electing Option 2. Course 19 is prerequisite. *Three hours a week.* Fall semester.

25b. Railroad Engineering.—A course of lectures and recitations taking up the work of maintenance and betterments. Required of students electing Option 2. Course 25a is prerequisite. *One hour a week.* Spring semester.

26. Cement Testing.—This course consists of laboratory work for the purpose of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is required of students in Mechanical Engineering in the fall semester and of students in Civil Engineering in the spring semester. Course 20 is prerequisite for spring semester course. *The time varies.*

27. Simple Curves and Earthwork.—A lecture course on the theory and practice of simple railroad curves, and on the field and office practice of staking out and computing earthwork. Given to students outside of the curriculum in Civil Engineering who desire to take Courses 4b and 4c. Courses 1a and 2a are prerequisite. *One hour a week.* Spring semester.

ELECTRICAL ENGINEERING

Professor Barrows; Associate Professor Childs; Mr. Nash

1a. Elements of Electrical Engineering.—This course takes up the practical application of laws studied in physics and the fundamental principles of electrical engineering. The work is of the nature of a text-book course, consisting of recitations and problems. Required of juniors in Electrical Engineering. *Three hours a week.* Fall semester.

1b. Elements of Electrical Engineering.—A continuation of Course 1a, showing the application of the fundamental principles to the construction, operation, and testing of direct current generators and motors and to general engineering problems. Required of juniors in Electrical Engineering. *Three hours a week.* Spring semester.

2b. Laboratory Work.—Electrical measurements, and the operation and testing of direct current generators and motors. This course illustrates the practical application of the work given in Courses 1a and 1b. Required of juniors in Electrical Engineering. The charge for this course is $2.00. † *Three hours a week.* Spring semester.

3a. Elements of Alternating Currents.—A study of the effect of alternating currents upon carious electrical circuits; voltage, current, and wattage relations in inductive and capacity circuits; calculations and problems. Required of seniors in Electrical Engineering. *Three hours a week.* Fall semester.

3b. Alternating Current Machinery.—A continuation of Course 3a, taking up the application of the fundamental elements of alternating currents to the design, construction, and operation of apparatus and machinery; the study of polyphase apparatus in the generation, transmission, distribution, and utilization of power. Required of seniors in Electrical Engineering. *Four hours a week for the first nine weeks.* Spring semester.

4a. Electrical Development.—A course on the design, construction, and cost of electro-magnets and clutches, electric heating apparatus, direct current generators and motors, and the general features of the design of alternating current machinery; the study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in Electrical Engineering. *Two hours a week.* Fall semester.

4b. Technical Reviews.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and presents the results of such investigation to the class; also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in Electrical Engineering. *One hour a week.* Spring semester.

5a. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in Course 4a. Calculations are made for electro-magnetic devices and for direct current generators, involving a knowledge of the fundamental electrical principles of design, the principles of mechanical design, cost of materials and cost of labor, and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in Electrical Engineering. † *Four hours a week.* Fall semester.

6a. Laboratory Work.—A continuation of Course 2b, taking up the testing of direct current apparatus and machinery, and alternating current measurements; investigation of power plant equipment and electric lighting. Required of seniors in Electrical Engineering. The charge for this course is $3.00. † *Four hours a week.* Fall semester.

6b. Laboratory Work.—A course showing the practical application of the work done in Courses 3a and 3b, and continuing the laboratory work of Course 6a, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in Electrical Engineering. The charge for this course is $3.00. † *Four hours a week.* Spring semester.

7b. Electrical Engineering.—A course in general engineering applications and practical problems, such as will be met with after the student leaves college, applying all the work and training of the course and the technical ability of the student. Required of seniors in Electrical Engineering. *Four hours a week, second nine weeks.* Spring semester.

8b. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus and development of original ideas of the student; also for testing,

repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in Electrical Engineering. *Seventy-two hours during the senior year.*

9a. Thesis Work.—The designing of electrical apparatus or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in Electrical Engineering. *Fall semester and through the senior year, as arranged.*

10a. Alternating Current Development and Application.—A required course for seniors in Mechanical and Chemical Engineering which continues the work taken up in Course 10b. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from the operating engineer's point of view. *Two hours a week.* Fall semester.

10b. Electrical Development and Application.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of seniors in Mechanical and Chemical Engineering. *Two hours a week.* Spring semester.

11a. Laboratory Work.—For Mechanical and Chemical Engineers. Electrical measurements, and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in Courses 10b and 10a. The work is arranged for the particular needs of the mechanical engineer. This course is open to civil engineering students who have previously elected one of the preliminary electrical courses. It may be followed by Courses 6a and 6b, by those wishing to become familiar with alternating current machinery. Required of seniors in Mechanical and Chemical Engineering. The charge for this course is $3.00. † *Four hours a week.* Spring semester.

12b. Electrical Transmission and Distribution of Power.—A required course for seniors in Option 1 in Civil Engineering, taking up

the elements of electrical measurements, the generation, transmission, and utilization of power, covering the electrical fature of water power development. *Two hours a week.* Spring semester.

13b. Electrical Railway Engineering.—A study of the preliminary steps taken in electric railway engineering; the selection of the proper motor equipment for a given class of service; car, bond, and transmission testing. Optional to seniors in Electrical Engineering. *Two hours a week.* Spring semester.

14a. Illuminating Engineering.—A course devoted to the study of the different types of lamps, light, photometry, illumination caluculations, and the problems of interior and exterior illumination. Optional to juniors in Electrical Engineering. *Two hours a week.* Fall semester.

15b. Telephone Engineering.—A course dealing with the principles of telephone apparatus and circuits. The different telephone systems, together with party lines, trunk lines, and central station problems are given due consideration. Optional to juniors in Electrical Engineering. *Two hours a week.* Spring semester.

16b. Electrical Power Plants.—This course covers the electrical equipment of the power plant. Particular attention is given to the methods of control, circuit interrupting devices, lightning arresters, and methods of arranging station and substation switch boards. Required of seniors in Electrical Engineering. *Two hours a week.* Spring semester.

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences.

MECHANICAL ENGINEERING

Professor Jewett; Associate Professor Herschel; Mr. Davee; Mr. Carter; Mr. Lekberg; Mr. Kent

1a, Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern woodworking practice, and also teach him to work from dimensioned

drawings. These exercises lead up to pattern-making. The pattern work consists of making complete patterns and core boxes from drawings. Required of students in Mechanical Engineering. Charge for materials, $4.00. * *Six hours a week.* Fall semester.

1b. Woodworking.—A shorter course than 1a, arranged for students in Electrical Engineering. Required. Charges for materials, $4.00. * *Four hours a week.* Fall semester.

2. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in Mechanical and Electrical Engineering. Charge for material, $5.00. * *Four hours a week.* Spring semester.

3. Kinematical Drawing.—This course supplements 4. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in Mechanical Engineering. * *Four hours a week.* Fall semester.

4. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. Required of students in Mechanical and Electrical Engineering. *Three hours a week.* Spring semester.

5a. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Required of students in Mechanical Engineering. Charge for materials, $5.00. * *Six hours a week.* Fall and spring semesters.

5b. Machine Work.—A shorter course than 5a and 5b, required of students in Electrical Engineering. Charge for material $5.00. * *Four hours a week.* Fall and spring semester.

6. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with Course 5, ten per cent. of the hours registered for under Course 5 being applied to foundry work.

7. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanisms; the Zeuner, Bilgram, and other

valve-diagrams are made use of in this connection; this course is given in conjunction with 17; practical problems are solved in the drawing room. Required of students in Mechanical Engineering. *Two hours a week.* Spring semester.

8. Machine Design.—A study of the designing of machines, proportioning of parts for strength and rigidity, etc. Required of students in Mechanical and Electrical Engineering. *Three hours a week.* Spring semester.

9. Materials of Engineering.—Properties of the metals, timber, rope; protective coatings and preservatives—first half. Graphics—second half. Required of students in Mechanical Engineering. *Two hours a week.* Fall semester.

10. Steam Engineering.—This course deals with the fundamental theories of gases and steam, illustrated by problems of practical form. The laws of thermodynamics; laws of gases; characteristic equations for gases; kinds of expansion and compression; Carnot's cycle; heat quantities in steam; use of the steam tables; steam equations; quality of steam; calorimeters; entropy. Required of students in Mechanical and Electrical Engineering. *Two hours a week.* Spring semester.

11. Steam Engineering.—Types and details of steam boilers, engines, and auxiliary machinery. A consideration of fuels and the chemistry of combustion; efficiency factors of the steam boiler plant; heat losses in steam engines; compound steam engines; refrigeration; gas engine cycles and gas producer principles. For students in Electrical Engineering valve gears is included. Required of students in Mechanical and Electrical Engineering. Course 10 is a prerequisite. *Three hours a week.* Fall semester.

12. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room. Required of students in Mechanical Engineering. **Six hours a week.* Fall semester.

13. Hydraulic Machinery.—A study of hydraulic turbines, water wheels, and other features of hydraulic power plant development. *Two hours a week.* Spring semester.

15a. Mechanical Laboratory.—The calibration of instruments used in engineering testing, followed by the more elementary experimental work. Required of juniors in Mechanical Engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

15b. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, valve settings, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. † *Two hours a week.* Fall semester.

15c. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. † *Four hours a week.* Spring semester.

16. Steam Engineering.—A continuation of Courses 10 and 11, dealing with steam engines, steam turbines, air compressors, refrigerating machines, and gas engines; considerations affecting the design and efficiency of operation of heat motors, the lay-out of power plants, and power plant economics; organization and management of manufacturing plants. Required of students in Mechanical Engineering. *Two hours a week.* Spring semester.

17. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general machine design; a steam engine is partially designed in the drawing room. Required of students in Mechanical Engineering. * *Six hours a week.* Spring semester.

18. Machine Design.—A continuation of Course 8, including the execution of the design of some typical machines. Required of students in Mechanical Engineering. * *Six hours a week.* Fall semester.

19. Machine Drawing.—Instruction in modern drafting-room methods, shop terms, etc. The practical application of drawing to use in the construction of machines. Required of students in Mechanical and Electrical Engineering. * *Four hours a week.* Spring semester.

20. Heating and Ventilation.—A lecture course. Required of students in Mechanical Engineering. *One hour a week.* Spring semester.

21. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.* Fall and spring semesters.

22. Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

24. Mechanism of Machines.—Lectures supplementing Course 4. Required of students in Mechanical Engineering. *One hour a week.* Fall semester.

25. Strength of Materials by Test.—A course in the mechanical laboratory for students in Civil Engineering. The charge for the course is $2.00. † *Two hours a week.* Spring semester.

26. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the students in Electrical Engineering. The charge for the course is $2.00. † *Three hours a week.* Fall semester.

MECHANICS AND DRAWING

Professor Weston; Assistant Professor Grover; Mr. Farnham

1. Drawing.—Instruction and practice in technical freehand drawing and lettering, in the care of drawing instruments and their use in elementary problems involving right lines, circles, conic sections, and orthographic projections. * *Six hours a week.* Fall semester.

2. Drawing.—A continued study of the methods of orthographic projection, isometric projection, and oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. * *Six hours a week.* Spring semester.

3. Drawing.—The elementary principles and problems of descriptive geometry including intersections and developments. * *Six hours a week.* Fall semester.

4. Drawing.—A continued study of the making of working drawings of simple machines, together with instruction and practice in making titles for the same. * *Six hours a week.* Spring semester.

5. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curves; torsional stresses and theories of stress in long columns. *Five hours a week.* Fall semester.

6. Mechanics.—A continuation of Course 5. *Five hours a week.* Spring semester.

7. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function, with applications to problems in gravitation, hydromechanics, etc. *Two hours a week.* Fall semester.

8. Advanced Mechanics.—A continuation of Course 7. *Three hours a week.* Spring semester.

10. Drawing.—A course designed especially for students in Agriculture and non-engineers. It combines the fundamental principles of Course 1 and Course 2. **Six hours a week.* Fall semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 198.

PHARMACY

Professor Jackman

1. Pharmaceutical Chemistry.—Chemical formulæ; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. The text-book is Prescott and Johnson's Qualitative Chemical Analysis. *Five hours a week.* Fall semester.

2. Pharmacy.—Pharmacopœias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; pharmaceutical arithmetic and problems; the chemical elements, official salts, their preparations; organic compounds, their official preparations; official drugs,

their preparations; animal preparations; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall semester.

3. Laboratory Pharmacy.—Official and National Formulary preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, and other galenicals; official tests of chemicals, drugs, and preparations for identity, strength, and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. † *Twelve hours a week.* Fall semester.

4. Pharmacopœia.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring semester.

5. Inorganic Pharmacognosy.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall semester.

6. Organic Pharmacognosy.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Culbreth's Materia Medica. *Four hours a week.* Spring semester.

7. Materia Medica.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall semester.

9. Pharmacy Readings.—Current pharmacy literature; research and reference readings; abstracting; reports. † *Three hours a week.* Spring semester.

10. Laboratory Pharmacy.—A continuation of Course 3. † *Ten hours a week.* Spring semester.

11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to principles, and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc. The text-book is Ruddiman's Incompatibilities in Prescriptions. *Three hours a week.* Spring semester.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 199.

PHYSICS

The courses in this department are described under the College of Arts and Sciences.

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all men students with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

Professor Glass

1. Military, First Year Course
   (a) Practical
      1—U. S. Infantry Drill Regulations, to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies
      2—Infantry Target Practice
      3—Field Service Regulations
      4—Guard Duty
   (b) Theoretical
      1—U. S. Infantry Drill Regulations, to include the School of the Company
      2—Manual of Guard Duty
      3—Field Service Regulations
      4—Small Arms Firing Regulations

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the freshman year, counting one-fifth credit.*

2. Military, Second Year Course
   (a) Practical
      The same as Course 1(a)
   (b) Theoretical
      1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies

2—Records and Official Papers
3—Small Arms Firing Regulations
4—Field Service Regulations

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the sophomore year, counting one-fifth credit.*

3. Military, Third Year Course
   (a) Practical
      Duties consistent with rank in carrying out (a) in Courses 1 and 2
   (b) Theoretical
      Assistant instructors over those taking Course 1(b)

Open to all who have completed Course 2. *Three hours, or the equivalent, a week, counting one-fifth credit*

4. Military, Fourth Year Course
   (a) Practical
      The same as for Course 3(a)
   (b) Theoretical
      Assistant instructors over those taking Course 2(b)

Open to all who have completed course 3. *Three hours or the equivalent, a week, counting one-fifth credit.*

PHYSICAL CULTURE AND ATHLETICS

Professor Wingard

1. Physical Training.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movements; elementary dumbbell, wand, and apparatus exercises. *One hour lecture and * two hours practice a week.* Fall semester.

2. Physical Training.—Intermediate and advanced class exercises and combination apparatus work. *One hour lecture and * two hours practice a week.* Spring semester.

MAINE AGRICULTURAL EXPERIMENT STATION

STATION STAFF

CHARLES DAYTON WOODS, Sc. D.	*Director*
JAMES MONROE BARTLETT, M. S.	*Chemist*
WARNER JACKSON MORSE, Ph. D.	*Plant Pathologist*
RAYMOND PEARL, Ph. D.	*Biologist*
OSKAR AUGUSTUS JOHANNSEN, Ph. D.	*Entomologist*
EDITH MARION PATCH, Ph. D.	*Associate Entomologist*
HERMAN HERBERT HANSON, M. S.	*Associate Chemist*
CHARLES EDWARD LEWIS, Ph. D.	*Associate Plant Pathologist*
MAYNE ROSE CURTIS, M. A.	*Assistant Biologist*
ALBERT VERRILL, B. S.	*Assistant Chemist*
EDWARD EUGENE SAWYER, B. S.	*Assistant Chemist*
HELEN WILLARD AVERILL, B. A.	*Assistant Chemist*
ROYDEN LINDSAY HAMMOND	*Seed Analyst and Photographer*
WALTER ANDERSON	*Poultryman*
WELLINGTON SINCLAIR	*Superintendent of Highmoor Farm*
CLARENCE WALLACE BARBER, B. S.	*Assistant Biologist*
GEORGE ALBERT YEATON	*Orchardist at Highmoor Farm*
ELMER ROBERT TOBIE, B. S.	*Inspector*
EDGAR ALBERT WHITE	*Inspector*
ALICE WOOD AVERILL	*Laboratory Assistant*
HARRY ALEXANDER	*Laboratory Assistant*
VERNOM FOLSOM	*Laboratory Assistant*
CHARLES INMAN	*Assistant*
ESTELLA MORRISON	*Computer*
BLANCHE FOLSOM POOLER	*Clerk and Stenographer*
GEM COOMBS	*Stenographer*

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 8) composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, the State Dairymen's Association, the Maine Live Stock Breeders Association, and the Maine Seed Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station, and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1911-12 was about $65,000; $15,000 of which came from the Hatch fund; $15,000 from the Adams fund; $20,000 from State appropriations and fees from feeding stuff inspection, fertilizer inspection, food and drug inspection, fungicide and insecticide inspection, and seed inspection; $4,500 from State appropriation for printing; $1,000 from the United States Department of Agriculture for carrying on coöperative experiments with poultry; and about $8,500 from the sale of produce and miscellaneous sources.

THE OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition

and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Station can undertake from the Adams Act fund is more restricted as the fund can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 24. The Station is well equipped in laboratories and apparatus, particularly in the lines of chemical, entomological, horticultural, pomological, vegetable pathological, and poultry investigations. Its poultry plant is probably the most complete of that of any experiment station in the country. It has extensive collections illustrating the botany and entomology of the State. It has a library of over 3,500 volumes, chiefly agricultural and biological journals and publications of the various experiment stations.

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn, and other farm crops." The farm is situated in the counties of Kennebec and Androscoggin, largely in the town of Monmouth. It is on the Farmington Branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor," is on the farm.

The farm contains 225 acres, about 200 of which are in orchards, fields and pastures. There are in the neighborhood of 3,000 apple trees upon the place which have been set from 10 to 20 years. Fields that are not

in orchards are well adapted to experiments with corn, potatoes, and similar general farm crops. The house has two stories with a large wing, and contains about 15 rooms. It is well arranged for the Station offices and for the home of the farm superintendent. The barn is large, affording storage for hay and grain. The basement affords limited storage for apples, potatoes, and roots.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, orchard and field experiments, poultry investigations, and entomological research. Some of these are in coöperation with bureaus of the United States Department of Agriculture.

INSPECTIONS

The inspection of agricultural seeds, the inspection of concentrated feeding stuffs, the inspection of commercial fertilizers, the inspection of food and drugs, the inspection of fungicides and insecticides, and the testing of the graduated glassware used in creameries are entrusted to the Station through its Director, who is responsible for the execution of the public laws relating to these matters. The cost of the inspections is borne by a State appropriation and by fees.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are printed as Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries, and scientific workers. Bulletins which contain

matter of immediate value to practical agriculture are sent free to residents of Maine whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually, and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs, and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars, and similar fleeting publications. From twenty to thirty are published each year and are sent to different addresses according to the nature of the subject matter.

On request, the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

SUMMER TERM

The Summer Term of the University of Maine is not a summer school, but so far as practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. Students who desire to anticipate work in their curricula, or who may have work in arrears. A student should be able to make one credit, the equivalent of a five hours' subject for eighteen weeks, during the Summer Term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the university books.

Courses of Study

During the summer of 1912 courses were offered in the following subjects: Botany, Chemistry, Home Economics, Education, English, French, German, History, Horticulture, Latin, Mathematics, Mechanics, Physics, and Woodwork. These courses are described in connection with the courses offered at the University during the remainder of the year.

Lectures 1912

Professor G. D. Chase, American Dialect
Professor L. E. Woodman, The Ether
Professor G. W. Thompson, (Organ Recital)
Professor A. J. Jones, Measuring Results in Education
President R. J. Aley,
The Recent Meeting of the National Education Association

Vesper Services

A brief religious service is conducted each Sunday afternoon at 4.00 P. M. in the Library. This consists of a song service and a brief address.

Library

Throughout the Summer Term the university library, containing over 48,000 volumes and having about three hundred periodicals and the Maine daily papers, is open from 9.00 A. M. to 12 M., and from 2.00 to 5.00 P. M. daily, except Saturday afternoon and Sunday.

The library privileges ordinarily accorded to university students, including the home use of books, are extended to students in the summer courses.

Laboratories, Museums, and Observatory

The laboratories belonging to the departments of Physics, Chemistry, and Botany are available for use of the students. In the physical and chemical laboratories there is ample provision for carrying on the various courses from the preparatory work to that of the graduate student in the University.

The botanical laboratory is in charge of the Professor of Biology. The student is furnished with microscope, specimens, and preparations for advanced work.

The museum is illustrative of the rocks and fauna of Maine, and is open at stated periods for the use of the students.

The observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The observatory will be open to the students of the Summer Term one evening each week.

Teachers' Agency

The authorities of the Summer Term have made arrangements with a Teachers' Agency whereby the students in attendance may secure the benefits of the agency without paying the usual registration fee. Fre-

quent calls are received each year for teachers, the demand greatly exceeding the supply. Every effort will be made to secure satisfactory positions for properly qualified teachers.

Expenses

Tuition for the term of six weeks, covering all charges for instruction for a registration of fifteen hours a week, and use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories is as follows:

For residents of Maine, $12.00.

For residents of other states, $18.00.

Board and room in the university buildings, including light and the necessary furniture, $30.00 for the term. The charge for room alone is $1.00 per week, and for board alone $4.00 per week. Men should bring sheets, pillow cases, and towels.

Recreation

Most of the class work is held during the forenoon, leaving the afternoon and evening free for study and recreation.

On the campus are several excellent tennis courts. The neighboring country affords many attractive excursions, on foot, by bicycle, carriage, automobile, or electric cars. Maine's famous seaside resort, Bar Harbor, is but one and one-half hours distant by rail, while Mount Kineo and Moosehead Lake are at only a slightly greater distance and easily accessible.

Within easy riding or wheeling distance are Lakes Pushaw and Chemo, as well as several attractive mountains.

In General

Prospective students are invited to consult the President, or any of the instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privileges.

If there should be a considerable demand for other studies than those named, arrangements will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1912. Unimportant changes are likely to be made in 1913.

ALUMNI ASSOCIATIONS

These associations have been organized for the purpose of extending the influence of the University, and keeping alive its spirit in various sections of the country. They have rendered efficient service in promoting the interests of the University.

GENERAL ASSOCIATION

President, Charles W. Mullen, 1883, Bangor
Vice-President, Edson F. Hitchings, 1885, Orono
Recording Secretary, Fremont L. Russell, 1885, Orono
Corresponding Secretary, Ralph K. Jones, 1886, Orono
Treasurer, James A. Gannett, 1908, Orono
Necrologist, James N. Hart, 1885, Orono

ADVISORY COUNCIL

MEMBERS AT LARGE

Albert H. Brown, B. S., 1880, Old Town Maine..... 1912
George H. Hamlin, C. E., 1873, Orono, Maine..... 1912
Louis C. Southard, M. S., LL. D., 1875, Boston, Mass..... 1913
Charles E. Oak, M. E., 1876, Bangor Maine..... 1913
Perley B. Palmer, B. C. E., 1896, Orono Maine..... 1914
Jeremiah S. Ferguson, M. S., M. D., 1889, New York City..... 1914
Charles S. Bickford, B. S., 1882, Belfast, Maine..... 1915
George E. Thompson, B. C. E., 1891, Bangor, Maine..... 1915
Edward H. Kelley, B. S., 1890, Bangor, Maine..... 1916
C. Parker Crowell, B. M. E., 1898, Bangor, Maine..... 1916

Representing the College of Agriculture

Whitman H. Jordan, Sc. D., LL. D., 1875, Geneva, N. Y..... 1915

Representing the College of Arts and Sciences

DeForest H. Perkins, M. A., LL. B., 1900, Portland, Maine..... 1912

Representing the College of Law

Frank D. Fenderson, LL. B., 1899 Law, Limerick, Maine..... 1916

Representing the College of Technology

George F. Black, C. E., 1886, Portland, Maine..... 1913

The West Maine Association

President, S. W. Bates, 1875, First National Bank Building, Portland
Secretary and Treasurer, S. E. Patrick, 1903, Gorham

The Boston Association

President, S. P. Graves, 1903, 30 Court St., Boston, Mass.
Vice-President, E. E. Palmer, 1899,
Secretary and Treasurer, H. E. Sutton, 1909, 319 Washington St., Boston, Mass.

The New York Association

President, C. P. Gray, 1900, 60 West 58th St., New York City
Vice-President, J. R. Boardman, 1888, 90 West Broadway, New York City
Secretary and Treasurer, A. W. Stephens, 1899, 169 Rutledge Ave., East Orange, N. J.
Assistant Secretary, R. E. Lord, 1906, 1 Gramercy Park, New York City

The Western Association

President, Carlos Dorticos, 1903, 1311 East 51st St., Chicago, Ill.
Secretary and Treasurer, H. L. Nash, 1909, 327 Marion St., Oak Park, Ill.
Executive Committee, William Webber, 1884, W. O. Weston, 1900, C. C. Johnson, 1910, F. M. Davis, 1901, M. C. Hart, 1900.

The Washington (D. C.) Association

President, L. A. Rogers, 1896, 3735 Oliver St.
Vice-President, C. W. Weeks, 1905, 621 Hillsboro Street, Raleigh, N. C.
Secretary and Treasurer, H. W. Bearce, 1906, Bureau of Standards

The Penobscot Association

President, C. P. Crowell, 1898, 16 Broad St., Bangor
Vice-President, D. W. A. Bumps, 1875, Dexter
Secretary and Treasurer, J. H. McClure, 1905, 42 Hammond St., Bangor
Executive Committee, A. W. Sprague, 1905, Bangor, E. Lisherness, 1906, Bangor, H. S. Boardman, 1895, Orono

The Pittsburg Association

President, A. G. Mitchell, 1875, Pennsylvania Railroad, Pittsburg, Pa.
Vice-President, H. G. Hosmer, 1907, Pittsburg, Pa.
Secretary and Treasurer, B. F. Faunce, 1901, Pittsburg, Pa.
Executive Committee, C. D. Smith, 1905, H. E. Cole, 1902, J. G. Scales, 1910

The Kennebec Valley Association

President, Harold E. Cook, 1900, Waterville
Secretary, Ernest C. Butler, 1901, Skowhegan
Treasurer, Samuel J. Foster, 1903, Oakland
Executive Committee, J. H. Burleigh, 1897, E. C. Butler, 1901, H. E. Cook, 1900

The College of Law Alumni Association

President, F. D. Fenderson, 1899, Limerick
Vice-President, A. A. Lang, 1904, Gloucester, Mass.
Corresponding Secretary, G. H. Worster, 1905, 20 Hammond St., Bangor
Financial Secretary, N. V. MacLean, 1905, Bangor
Treasurer, B. W. Blanchard, 1904, Bangor

Alumni of the School and Teachers' Courses in Agriculture

President, Ralph L. Smith, 1912, Kennebunkport
Vice-Presidents, Walter S. Jones, 1912, Somerville, Mass., Roy E. Jones, 1912, Pelham, N. H.
Secretary and Treasurer, Perley F. Smith, 1912, East Brownfield
Executive Committee, Walter S. Jones, 1912, Roy E. Jones, 1912, and George Wentworth, 1912.

APPOINTMENTS

Speakers at the Junior Exhibition

Forest Bertram Ames, Bangor; Alice Josephine Harvey, Bangor; John Walter Hart, Holden; Mac Evelyn Crossman, Claremont, N. H.; George Clarence Clark, Portland; Antoinette Treat Webb, Bangor.

Speakers at the Sophomore Prize Declamation Contest

Joseph Lewis Brown, Bar Harbor; Hermon Richard Clark, Townsend, Mass.; William Earle Kimball, South Paris; Edward Michael Loftus, Bangor; Preston Hussey Martin, Fort Fairfield; Paul Wheeler Monohon, Biddeford; Anna Belle Perkins, Skowhegan; Wayland Dean Towner, Bangor.

Members of Phi Kappa Phi

Helen Willard Averill, Milltown; Everett Harlow Bowen, Bangor; Charles Brown Cleaves, Portland; Fred Enoch Fish, Farmington; Clifford Henry George, East Orrington; Lillian Curtis Jones, Bangor; Margaret June Kelley, Bangor; Oscar William Mountfort, Nashua, N. H.; Ralph Woodbury Redman, Orono; Thomas Edward Sullivan, Lubec; Carrie Luella Woodman, Claremont, N. H.; Karl Douglas Woodward, Kingston, Mass.; Helen Charlotte Worster, Bangor.

Members of Tau Beta Pi

1912

Irving Emory Center, Kingston, Mass.; Charles Brown Cleaves, Portland; Henry Harlan Eastman, Limerick; Philip Garland, Old Town; Clifford Henry George, East Orrington; James Foster Jackson, Jefferson; Lester Warner Jacobs, Rockland, Mass.; Walter Harrison Lilly, Woolwich; Oscar William Mountfort, Nashua, N. H.; Warren Hapgood Savary, East Wareham, Mass.; Ralph Oscar Shorey, Foxcroft; Harold Earle Winn, Dover, N. H.

1913

Burleigh Ansel Annable, Lynn, Mass.; George Freeman Clark, Tremont; Mark Dennis Cronan, Middletown, Mass.; Raymond Olden Jackson, Harrison; Allan Francis McAlary, Lewiston; Robert Arthur Pinkham, Farmington.

General Honors

Clarence Wallace Barber, Yarmouth; Everett Harlow Bowen, Bangor; Charles Brown Cleaves, Portland; Fred Enoch Fish, Farmington; Clifford Henry George, East Orrington; Fred Ruel Jones, Mercer; Lillian Curtis Jones, Bangor; William Mullins, Cambridge, Mass.; Oscar William Mountfort, Nashua, N. H.; Ralph Woodbury Redman, Orono; Thomas Edward Sullivan, Lubec; Carrie Luella Woodman, Claremont, N. H.; Helen Charlotte Worster, Bangor.

Honors in the College of Law

Everett Harlow Bowen, Bangor; Thomas Edward Sullivan, Lubec.

Reported to the Adjutant General, U. S. Army, for Publication in the U. S. Army Register, and to the Adjutant General of the State of Maine

Benjamin Calvin Kent, Bangor; William Rice Ballou, Bath.

PRIZES AWARDED

Kidder Scholarship, Fred Justin Lewis, Springfield, Mass.

Western Alumni Association Scholarship, Forrest Reuben Treworgy, Ellsworth

New York Alumni Association Scholarship, Paul Wheeler Monohon, Biddeford

Junior Exhibition Prize, Forrest Bertram Ames, Bangor

Sophomore Declamation Prize, Paul Wheeler Monohon, Biddeford

Franklin Danforth Prize, Clarence Wallace Barber, Yarmouth

Pittsburg Alumni Association Scholarship, Raymond Olden Jackson, Harrison

Kennebec County Prize, Clifford Henry George, East Orrington

Walter Balentine Prize, Donald Wing Sawtelle, Orono

Wingard Cup, Arthur Warren Abbott, Portland

Holt Prizes, William Emery Parker, Harrington; Leon Walter Smiley, Skowhegan; George Lawrence Hosmer, Rockland

L. C. Bateman Prize, Everett Burton Harvey, Bar Harbor

Lewiston Journal Prize, William Henry Nason, Calais

American Pharmaceutical Association Prize, William Osborne, Jr., Bangor

Father Harrington Prize, Elizabeth Hanly, Thomaston

The highest standing obtained by a member of the class of 1912 in the four years curriculum was made by Carrie Luella Woodman, Claremont, N. H.

The Class of 1908 Commencement Cup, which is awarded each year to the class having the largest percentage of its membership present at Commencement, was won in 1909 by the classes of 1872 and 1873; in 1910 the cup was won by the class of 1875; in 1911 it was won by the class of 1875; and in 1912 by the class of 1872.

The cup presented by the Senior Skulls to that Fraternity which has during the year maintained the highest average in scholarship was awarded in 1910 to Beta Theta Pi, in 1911 to Alpha Tau Omega, and in 1912 to Phi Gamma Delta.

COMMENCEMENT

The Commencement exercises of 1912 were as follows:

Saturday, June 8: Phi Kappa Phi Initiation and banquet, in the evening.

Sunday, June 9: Baccalaureate Address by Rev. Alson H. Robinson, Class of 1901, Newton Center, Mass.

Monday, June 10: Class Day Exercises; President's Reception.

Tuesday, June 11: Commencement Dinner; Meeting of Law Alumni; Alumni Lunch; Alumnæ Lunch; Meeting of the General Alumni Association; Class reunions.

Wednesday, June 12: Commencement Address, by Rev. M. Joseph Twomey, Pastor of the First Baptist Church, Portland; Announcement of Honors; Conferring of Degrees; Commencement Ball.

DEGREES CONFERRED

COLLEGE OF AGRICULTURE

Bachelor of Science

Clarence Wallace Barber ..... Yarmouth
Charles Alton Cavanaugh ..... Portland
Arthur Lowell Deering ..... Bridgton
Clarence Dunlap ..... Farmington
Marion Corthell Estabrooke ..... Orono
William Melvin Gray ..... Buscksport
Harrison Morton Hatch ..... West Groton, Mass.
Austin Whittier Jones ..... Bangor
Fred Ruel Jones ..... Mercer
Maurice Daniel Jones ..... Unity

Ellis Wyman McKeen ..... Fryeburg
George Leavitt Parker ..... Skowhegan
Ralph Woodbury Redman ..... Orono
Charles Winfield Rowe ..... South Paris
Luther Sampson Russell ..... Orono
Arthur Leroy Sturtevant ..... Milo

Bachelor of Science in Forestry

Lloyd Everett Houghton ..... Lee
Philip Rodney Hussey ..... Patten
William James Henry Miller ..... South Berwick
James Plummer Poole ..... Gloucester, Mass.
Harlan Hayes Sweetser ..... Cumberland Center
Lynwood Burkett Thompson ..... Belfast

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts in Economics

William Rice Ballou ..... Bath
Robert Loring Buzzell ..... Old Town
William Mullins ..... Cambridge, Mass.
Dana Peabody Washburn ..... Calais
George Roundy Woodbury ..... Beverly, Mass.

Bachelor of Arts in English

Celia May Coffin ..... Bangor
Carl Bertram Estabrooke ..... Orono
Hazel Folsom Mariner ..... Milford
Helen Charlotte Worster ..... Bangor

Bachelor of Arts in German

Margaret June Kelley ..... Bangor

Bachelor of Arts in History

Ruth Merrill ..... Auburn

Bachelor of Arts in Latin

Marjorie Adell White ..... Danforth
Esther Margaret Dixon ..... Calais

Bachelor of Arts in Mathematics

Alma Eliza Clapp ..... Brewer
Lillian Curtis Jones ..... Bangor
Carrie Luella Woodman ..... Claremont, N. H.

Bachelor of Arts in Physics

Fred Enoch Fish ..... Farmington
William Everett Hebard ..... Southbridge, Mass.

Bachelor of Arts in Romance Languages

Edward Frazier Carleton ..... South Groveland, Mass.

Bachelor of Arts in Chemistry

Helen Willard Averill ..... Milltown
Edward Eugene Sawyer ..... Old Town

Bachelor of Arts in Biology

Emily Mary Bartlett ..... Orono

COLLEGE OF LAW

Bachelor of Laws

Frederick Prescott Adams ..... Cherryfield
William Vincent Reginald Baldwin ..... North Wilbraham, Mass.
Everett Harlow Bowen, B. A. (Colgate University, 1903); M. S., (1905) ..... Bangor
James Louis Boyle, B. A. (St. Joseph's College, 1906) ..... Calais
Percy Truman Clarke ..... Franklin
Albert Fremont Cook ..... Bangor
Arthur Albert Greene ..... Highgate Center, Vt.
Leigh Irving Harvey ..... Bangor
Ralph Morrill Ingalls ..... Bridgton
Ballard Freese Keith, B. A., (1908) (Oxford University, 1911) ..... Old Town
Howard Benjamin Rand ..... Haverhill, Mass.
Henry Waide Sawyer ..... Milbridge
Thomas Edward Sullivan ..... Lubec
Harry Alonzo Thompson ..... Jackson, N. H.
Harold Edward Weeks, B. A. (Bowdoin College, 1906) ..... Fairfield

COLLEGE OF TECHNOLOGY

Bachelor of Science in Chemistry

Charles Smith Benjamin ..... Old Town
Robert Elliott Hussey ..... Portland
Karl Douglas Woodward ..... Kingston, Mass.

Bachelor of Science in Civil Engineering

Harry Poole Burden ..... Lynn, Mass.
Carl Schurz Cleaves ..... Bar Harbor
John Patrick Cronin ..... Worcester, Mass.
Harry Lawrence Crosby ..... Portland
Franklin Lloyd Darrell ..... Brooklyn, N. Y.
David Ray Duran ..... Westbrook
Samuel Dyer ..... Attleboro, Mass.
Henry Harlan Eastman ..... Limerick
Herbert Levi Fisher ..... Charlotte
Lester Warner Jacobs ..... Rockland, Mass
George Edward King, Jr. ..... Bethel
Frank Hodgkins Lancaster ..... Presque Isle
Walter Harrison Lilly ..... Woolwich
Roger Winchester Macdonald ..... Peabody, Mass.
Warren McDonald ..... Portland
Oscar William Mountfort ..... Nashua, N. H.
Atlee Burpee Osborne ..... Fort Fairfield
Walter Ezra Perkins ..... Old Town
Lynne Thomas Rand ..... Unity
Warren Hapgood Savary ..... East Wareham, Mass.
Leon Walter Smiley ..... Skowhegan
Oscar Abel Wakefield ..... Andover
Frank William Winchester ..... Nahant, Mass.
Walter Remick Witham ..... Madison

Bachelor of Science in Electrical Engineering

John Emmons Ash ..... Bar Harbor
Charles Brown Cleaves ..... Portland
Nathan Clifford Cummings ..... Gorham
Clifford Henry George ..... East Orrington
Leo Melville Gerrish ..... Berlin, N. H.
Robert James Gordon ..... Bangor

Maynard Sumner Gould ..... Camden
Benjamin Haskell ..... Westbrook
James Foster Jackson ..... Jefferson
Charles William Newell ..... Houlton
William Emery Parker ..... Harrington
Ralph Benjamin Pond ..... Eau Claire, Wis.
Montelle Chester Smith ..... Old Town
William Alfred Southwick ..... West Peabody, Mass.
Graham Brown Spear ..... Springfield, Mass.

Bachelor of Science in Mechanical Engineering

Irving Emory Center ..... Kingston, Mass.
Walter Bradbury Emerson ..... Biddeford
Philip Garland ..... Old Town
George Lawrence Hosmer ..... Rockland
Leslie Mansfield Huggins ..... Malden, Mass.
Benjamin Calvin Kent ..... Bangor
Albert Mortimer Nickels ..... Cherryfield
Charles Eugene Sullivan ..... Gorham, N. H.

Pharmaceutical Chemist

Victor Hugo Hinckley ..... West Jonesport
Fred Clook Johnson ..... Princeton
Lloyd Dodge Nugent ..... North Lubec
William Osborne, Jr. ..... Bangor
Fred Thomas Stewart ..... Linneus

ADVANCED DEGREES

IN COURSE

Master of Arts in Chemistry

Arthur Moses Buswell, B. A. (University of Minnesota, 1910) .... Orono

Master of Science in Mathematics

Lowell Jacob Reed, B. S. (1907) ..... Orono

Master of Science in Physics

Ernest Claude Drew, B. S. (University of Vermont) 1909 ..... Orono

Master of Laws

Benjamin Willis Blanchard, LL. B. (1904) ..... Bangor
Charles Goodell Lewis, LL. B. (1908) ..... Boston, Mass.

PROFESSIONAL DEGREES

Civil Engineer

Amon Benjamin Brown, B. S. (1907) ..... Rupert, Idaho
Ernest Osgood Sweetser, B. S. (1905) ..... St. Louis, Mo

Electrical Engineering

Winfield Dexter Bearce, B. S. (1906) ..... Schnectady, N. Y.

Certificates in the School Course in Agriculture

Everett Webber Bartlett ..... Monroe
Francis Everest Clancy ..... Orono
Henry Tewksbury Covell ..... Farmington
Roger Eveleth ..... Auburn
Howard Freeman Goodwin ..... Marlboro, Mass.
Willis Crosby Hamilton ..... West Scarboro
Roy Edwin Jones ..... Pelham, N. H.
Walter Scott Jones ..... Somerville, Mass.
Charles Carlyle Larrabee ..... Old Town
William Henry Nason ..... Calais
Peter Andrew Pearson ..... Calais
Wilfred Sherman Rowe ..... Auburn
Perley Foster Smith ..... East Brownfield
Ralph Lord Smith ..... Kennebunkport
Cleba Charles Taylor ..... Skowhegan
John William Wadsworth ..... Cornish
Wilfred Allen Waterman ..... Auburn

Certificate in the Teacher's Course in Agriculture

George Francis Wentworth ..... Woodman, N. H.

Certificate in Two Years Course in Domestic Science

Rebecca Chilcott ..... Bangor

DEGREES OUT OF COURSES

Bachelor of Science

Edward Sewall Abbott (as of the Class of 1884).....Bridgton
James Martin Nowland (as of the Class of 1887).....Quincy, Mass.
William Robinson Pattangall (as of the Class of 1884).....Waterville

Bachleor of Civil Engineering

Charles Clement Elwell (as of the Class of 1878)....New Haven, Conn.
Elmer Ellsworth Greenwood (as of the Class of 1889).....Skowhegan
William Franklin Robinson (as of the Class of 1876)..Arlington, Mass.
Ambrose Harding White (as of the Class of 1886)....New York, N. Y.

Bachelor of Mechanical Engineering

Charles Henry Benjamin (as of the Class of 1878)....Lafayette, Ind.
Austin Dinsmore Houghton (as of the Class of 1887)..Santa Cruz, Cal.

Pharmaceutical Chemist

Charles Simming Bartlett (as of the Class of 1897).....Auburn
James Alfred Bird (as of the Class of 1897) .....Cambridge, Mass.
Daniel Lunt Cleaves (as of the Class of 1898).....Portland
William Henry Crowell (as of the Class of 1900)...New Britain, Conn.
Fred Elmer Hall (as of the Class of 1898).....Houlton
Alvin Willard Keirstead (as of the Class of 1897).....Wiscasset
Ernest Julian McCrillis (as of the Class of 1897).....Franklin, N. H.
William George McCrillis (as of the Class of 1897).....Bristol, N. H.
Wilbur George MacDougal (as of the Class of 1898)..East Millinocket
Curtis Boyce Mitchell (as of the Class of 1898).....Unity
Russell Davenport Walton (as of the Class of 1898).....Frankfort
Charles Harry White (as of the Class of 1897).....Orono

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agronomy, An. Animal Industry, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ch. Eng. Chemical Engineering, Ce. Civil Engineering, Ec. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Ht. Horticulture, Hy. History, He. Home Economics, Lt. Latin, Ms. Mathematics, Me Mechanical Engineering, Ph. Poultry Husbandry, Pm. Pharmacy, Pl. Philosophy, Ps. Physics, Rm. Romance Languages.

GRADUATE STUDENTS

Barber, Clarence Wallace, B. S., Ag. *Orono* Campus
University of Maine, 1912

Cleaves, Charles Brown, B. S., Ce. *Portland* No. Main St.
University of Maine, 1912

* Cousins, Irene B. A., Hy. *Old Town* Old Town
University of Maine, 1911

Darrow, William Hinds, B. A., M. A., Ht. *Orono* 16 Bennoch St.
Middlebury College, 1911. Cornell University, 1912

* Day, George Willis, B. S., Ch. *East Waterboro* East Waterboro
Dartmouth College, 1895

Day, Letitia Elizabeth, B. A., Lt. *Brewer* Brewer
University of Maine, 1911

Drew, Ernest Claude, B. S., M. S., Ps. *Orono* 16 Bennoch St.
University of Vermont, 1909. University of Maine, 1912

Durgin, Albert Guy, B. S., M. S., Ch. *Orono* Middle St.
University of Maine, 1908, 1909

Ewer, Louise Frances, B. A., Ec. *Bangor* Bangor
Mt. Holyoke College, 1912.

* Gilbert, William Henry, B. A., Ch. *Millinocket* Millinocket
University of Maine, 1909

* Summer Term.

Glover, Philip Holden, B. S., Ce. University of Maine, 1906	*Harrington*	Β Θ Π House
Herschel, Winslow Hobart, A. B., Me. Harvard, 1896	*Orono*	Mill St.
* McManus, Margaret Ellen, B. A., Eh. University of Maine, 1911	*Bangor*	Bangor
Reed, Lowell Jacob, B. S., M. S., Ms. University of Maine, 1907, 1912	*Orono*	College St.
Shepherd, Thomas Dudley, Ec.	*Wellesley Hills, Mass.*	Campus
Smith, Harry Woodbury, B. S., Ag. University of Maine, 1909	*Orono*	307 H. H. Hall
Ulrey, Clayton, A. B., Ps. University of Indiana, 1911	*Orono*	208 H. H. Hall
Whittier, Earl Ovando, B. S., Ch. University of Maine, 1911	*Orono*	College St.
Wilbur, Walter Edmund, B. S., M. S., Ms. University of Maine, 1908, 1911	*Orono*	Pine St.
Worster, Helen Charlotte, B. A., Eh. University of Maine, 1912	*Bangor*	Mill St.

SENIORS

Ackley, Edward Preble, Ec.	*Peaks Island*	Φ Η Κ House
Ahrens, Bernard Alexander, Ph.	*Long Island City, N. Y.*	Θ Χ House
Amadon, Arthur Franklin, Fy.	*Boston, Mass.*	Α Τ Ω House
Ames, Forrest Bertram, Eh.	*Bangor*	Φ Η Κ House
Annable, Burleigh Ansel, Ce.	*Lynn, Mass.*	Θ Χ House
Ayer Elmore, Me.	*Dorchester, Mass.*	Α Τ Ω House
Ayer, Harold Francis, Ht.	*Haverhill, Mass.*	Θ Χ House
Bigelow, Elson Hartwell, Me.	*Bridgton*	Κ Σ House
Bird, Maurice Cobb, Ht.	*Rockland*	Β Θ Π House
Blanchard, Ralph Childs, Ee.	*Cumberland Ctr.*	Δ Κ House
Bolton, Philip Sumner, Ch.	*Gorham*	Σ Α Ε House
Borden, Marion Wilhelmina, He.	*Providence, R. I.*	University Inn
Brewer, Warren Grant, Ec.	*Peaks Island*	Φ Γ Δ House
Brown, Henry Leavitt, Ch.	*Ayer, Mass.*	Κ Σ House
Burgess, Howard, Ee.	*China*	Α Τ Ω House
Burns, William Hugh, Ed.	*Dennysville*	14 Bennoch St.
Buzzell, Ralph Waldo, Ce.	*Camden*	Φ Η Κ House

* Summer Term.

Cannon, Arthur Hildreth, Me.	*Orono*	Myrtle St.
Carleton, John Harvey, Ce.	*So. Berwick*	Δ T Ω House
Chandler, Clifton Edward, Ec.	*Portland*	Φ Γ Δ House
Chase, Alden, Ee.	*Bryant Pond*	Θ X House
Chase, Edward Everett, Jr., Ec.	*Bluehill*	Σ X House
Church, James Elwood, Ch.	*Gardiner*	Δ T Δ House
Clark, George Freeman, Ce.	*Tremont*	302 Oak Hall
Clarke, George Clarence, Ms.	*Portland*	Θ X House
Cobb, Frank Collins, Ee.	*Livermore Falls*	Σ A E House
Coughlin, Edward Thomas Aloysins, Ch.	*Holyoke, Mass.*	Δ T Δ House
Cronan, Mark Dennis, Ce.	*Middleton, Mass.*	202 H. H. Hall
Crossman, Mae Evelyn, Eh.	*Newport, N. H.*	Mt. Vernon House
Davis, Oscar Henry, Me.	*No. Berwick*	K Σ House
Dillingham, Winfield Presbury, Ec.	*Freeport*	K Σ House
Dyer, Guy Valentine, Ec.	*Calais*	Σ X House
Faulkner, Harold Clark, Me.	*Lynn, Mass.*	Θ X House
Finkbeiner, Daniel Talbot, Ce.	*Clearfield, Pa.*	Main St.
Floyd, Raymond Ec.	*Brewer*	Φ K Σ House
Groves, Walter Clyde, Ce.	*Camden*	A T Ω House
Hamlin, George Harold, Ec.	*Orono*	92 Main St.
Harriman, Royden Henry, Ee.	*Bangor*	Bangor
Hart, John Walter, Ag.	*Holden*	Σ A E House
Harvey, Alice Josephine, He.	*Bangor*	Bangor
Hinkley, Harry Wendell, Ce.	*Rangeley*	202 H. H. Hall
Hodges, Ralph Corydon, Ee.	*Richmond*	Δ K House
Huntington, Richard Thomas, Eh.	*Augusta*	Σ A E House
Jackman, Percy Edward, Ht.	*Vanceboro*	Δ T Δ House
Jackson, Raymond Olden, Me.	*Stillwater*	Stillwater
Jennison, Elwood Whitney, Me.	*Bangor*	K Σ House
Jordan, Harry Gilman, Ce.	*Waltham*	Φ K Σ House
Knight, Carroll Morse, Ce.	*Cliftondale, Mass.*	Φ H K House
Leonard, Paul Cyprian, Ec.	*Frankfort*	Φ Γ Δ House
Littlefield, John, Ce.	*Brewer*	Φ K Σ House
Long, Roger David, Ht.	*North Raymond*	Φ Γ Δ House
Lutts, Carleton Gardiner, Ch.	*Kittery*	Σ X House
McAlary, Allan Francis, Ce.	*Waterville*	A T Ω House
McCarthy, William Joseph, Ch.	*Lewiston*	Θ E House
Merrill, Mildred Hastings, He.	*Auburn*	100 Main St.
Merrill, William Hammond, Ee.	*Bangor*	Σ A E House
Mitchell, William Johnston, Ce.	*New Bedford, Mass.*	Δ K House

Murray, Walter Edward, Ee.	*Lynn, Mass.*	Θ X House
Norton, Carlos Everett, An.	*Cumberland Ctr.*	Δ K House
Ober, John Larcom, Ee.	*Beverly Farms, Mass.*	Σ A E House
Page, Edwin Richard, Ee.	*Winterport*	205 Oak Hall
Pinkham, Robert Arthur, Ee.	*Farmington*	202 H. H. Hall
Power, Richard Anderson, An.	*Portland*	Φ H K House
Quarmby, George Henry, Ee.	*Saugus, Mass.*	K Σ House
Richards, Harold Albion, Ee.	*Belfast*	Δ K House
Richardson, Carroll Raymond, Ee.	*Oakland*	202 H. H. Hall
Ricker, Elwyn Tristram, Ce.	*No. Saco*	K Σ House
Rogers, Luther Barker, Ee.	*Patten*	K Σ House
Russell, Mary Etta, He.	*Orono*	Campus
Savage, Ernest Thompson, Fy.	*Bangor*	B Θ Π House
Sawtelle, Donald Wing, An.	*Orono*	Forest St.
Seekins, Leon Elroy, Ec.	*Skowhegan*	K Σ House
Severance, Amanda Bailey, Lt.	*Old Town*	Old Town
Shorey, Ralph Oscar, Ce.	*Foxcroft*	Stillwater
Simpson, George Stevens, Ch.	*Marlboro, Mass.*	Θ E House
Small, Nathan Houston, Ec.	*Belfast*	Δ K House
Smith, Oscar Samuel, Pl.	*Bangor*	Bangor
Stone, Walter Christopher, Ch.	*Clinton, Mass.*	University Inn
Tabor, James Atwood, Jr., Ch.	*Corinna*	Φ H K House
Tilley, Glenwood Goding, Ee.	*Ashland*	A T Ω House
Towne, Harland Eugene, Ce.	*East Dover*	Stillwater
Tuck, Leon Sylvester, Ce.	*Lee*	302 H. H. Hall
Wallace, John Clyde, Ce.	*Portland*	B Θ Π House
Wardwell, Herbert Maurice, Jr., Ms.	*Newport*	Φ H K House
Webb, Antoinette Treat, Eh.	*Bangor*	Mt. Vernon House
Webster, Ernest John, Fy.	*Farmington*	Σ X House
Wescott, Clifford Walker, An.	*Patten*	K Σ House
Wetherbee, Ralph Wilbur, Ee.	*Hudson, Mass.*	Φ Γ Δ House

JUNIORS

Abbott, Arthur Warren, Ht.	*Portland*	Φ Γ Δ House
Adams, Archie Asbury, Me.	*LaGrange*	Maine St.
Adams, Harold Purington, Ht.	*Bowdoinham*	Φ K Σ House
Allen, Clifton Lowery, Ce.	*Mt. Vernon*	University Inn
Andrews, Robert Wilbur, Ce.	*West Pembroke*	B Θ Π House
Anthony, Benjamin Bennett, Fy.	*Wakefield, Mass.*	Σ X House
Atwood, Charles Raymond, Fy.	*Rumford*	Σ A E House

Bartlett, Louise, Lt.	*Orono*	College St.
Bean, Philip Hanson, Ce.	*Saco*	Forest St.
Beaupré, Estelle, Rm.	*Bangor*	Mt. Vernon House
Bickford, Miretta Lydia, Lt.	*Orono*	Main St.
Bodwell, Joseph Henry, An.	*Methuen, Mass.*	Σ A E House
Bradbury, Ira Miller, Ce.	*Gorham*	Φ Γ Δ House
Bray, Paul DeCosta, Ch.	*Turner*	B Θ Π House
Brewster, Edward H., Pl.	*Patten*	Patten
Brooks, James Stothard, Ce.	*Brewer*	Φ K Σ House
Brown, Lewis John, Ag.	*Gorham*	Δ T Δ House
Buck, William Harold, Ce.	*Ansonia, Conn.*	201 Oak Hall
Buzzell, Marion Stephanie, Rm.	*Old Town*	Old Town
Chalmers, Dwight Stillman, Ee.	*Albion*	Φ H K House
Chase, Charles Arthur, Fy.	*Sebec Station*	Δ T Δ House
Clark, Hermon Richard, Ee.	*Townsend, Mass.*	203 H. H. Hall
Cobb, Harold Vernon, Ec.	*Livermore Falls*	Σ A E House
Coffey, Ralph Thompson, Ht.	*South Brewer*	Θ X House
Conners, Edward Warren, Ce.	*Great Works*	Great Works
Cousins, Mary Longfellow, Lt.	*Old Town*	Mt. Vernon House
Coyne, Albert Lee, Ce.	*Worcester, Mass.*	Δ T Δ House
Creeden, James Coharn, Ce.	*Lewiston*	Θ X House
Crocker, Richard Foster, Ht.	*Belfast*	A T Ω House
Crowell, Harrison Philip, Ce.	*So. Portland*	Θ E House
Danforth, Stephen Paul, Ec.	*Foxcroft*	Θ X House
Dearborn, Fred Earle, Ch.	*Penacook, N. H.*	Θ E House
Dinsmore, Harold Lee, Ec.	*Hebron*	Φ K Σ House
Dore, Edward Albert, Ee.	*Bangor*	401 H. H. Hall
Duffy, Charles Daniel, Ec.	*Tilton, N. H.*	101 H. H. Hall
Ferguson, Albert Barnett, Bl.	*New York City*	K Σ House
Ferguson, Russell Sweetser, Bl.	*New York City*	K Σ House
Field, Leon Albion, Me.	*Biddeford*	Σ A E House
Foster, David Albert, Ce.	*Ellsworth Falls*	302 Oak Hall
Fowler, Ernest Eugene, Me.	*Hartford, Conn.*	Σ A E House
French, Norman Richards, Ps.	*Ft. Fairfield*	Σ X House
Gerrish, Harold Colby, Ec.	*Bangor*	102 H. H. Hall
Getchell, Edward Leonard, Ee.	*Waterville*	Σ A E House
Gifford, William Edward, Ce.	*Fairfield Center*	312 H. H. Hall
Goodwin, Fred Gilman, Ee.	*Charleston*	203 H. H. Hall
Haggart, Alexander LeRoy, Ce.	*Franklin, Mass.*	Φ K Σ House
Hall, Howe Wiggin, Ag.	*Rockland*	Φ Γ Δ House
Harvey, Everett Burton, Eh.	*Bar Harbor*	Φ H K House

Haskell, Theodore Winthrop, Ec.	*Westbrook*	Φ Γ Δ House
Hayes, Alden Burgess, Me.	*Bangor*	Σ A E House
Hettinger, Frederick Carle, Ch.	*Roslindale, Mass.*	Δ T Δ House
Higgins, Thomas Carol, Ce.	*Bar Harbor*	Θ E House
Hobart, Aileene Browne, Eh.	*Milford*	Milford
Hudson, James Russell, An.	*Winthrop*	B Θ Π House
Johnson, William Alonzo, Ee.	*Bangor*	102 H. H. Hall
Jones, Carrol Clair, Ec.	*Solon*	Φ H K House
Jones, Fréderick Sawtelle, Ee.	*Augusta*	B Θ Π House
Jones, Linwood Stuart, Ce.	*Belfast*	A T Ω House
Jordan, Marion Luella, Lt.	*Old Town*	Old Town
Junkins, John Norman, Me.	*Milford, N. H.*	Δ K House
Kelly, Charles Merrill, Jr., Ee.	*Ipswick, Mass.*	Φ H K House
Kimball, William Earle, Ce.	*South Paris*	Φ K Σ House
King, Albert Lincoln, Fy.	*South Paris*	Φ K Σ House
King, Henry Augustus, Ht.	*Peabody, Mass.*	Θ E House
Leavitt, Harry Ralph, Fy.	*Portland*	Δ T Δ House
Lewis, Fred Justin, Ce.	*Springfield, Mass.*	K E House
Libby, Arthur Clarence, Ce.	*Scarboro*	202 Oak Hall
Loftus, Edward Michael, Ch. Eng.	*Bangor*	Θ X House
Lucas, Warren Stanhope, Ms.	*Foxcroft*	Δ T Δ House
McKenney, Charles Raymond, Ht.	*Orono*	A T Ω House
McLauchlan, Leon Stanley, Ag.	*Ft. Fairfield*	Φ K Σ House
Makanna, Nicholas Philip, Ce.	*Bangor*	Campus
Martin, Preston Hussey, Ag.	*Ft. Fairfield*	Φ Γ Δ House
Martinelli, Mario, Ch.	*Wareham, Mass.*	Δ T Δ House
Monahan, William Collins, Ag.	*S. Framingham, Mass.*	Bennoch St.
Monohon, Paul Wheeler, Ag.	*Biddeford*	Φ K Σ House
Morris, Frank Albert, Eh.	*Old Town*	Old Town
Morse, Wilson Montgomery, An.	*Waterford*	Φ K ΣHouse
Murray, Paul Wheeler, Ec.	*Skowhegan*	K Σ House
Newman, George Burgess, Bl.	*Fryeburg*	K Σ House
Norcross, Fernando Treat, Ce.	*Portland*	Φ Γ Δ House
Parsons, John Thomas, Ee.	*South Paris*	Pine St.
Patterson, Lyle Leach, Ee.	*Newport*	Δ K House
Patterson, Sidney Winfield, An.	*Winslow*	301 H. H. Hall
Peaslee, Roy William, Ag.	*Randolph*	Δ T Δ House
Pendleton, Mark, Ec.	*Islesboro*	B Θ Π House
Perkins, Anna Belle, Rm.	*Skowhegan*	College St.
Philbrook, Philip Edwin, Me.	*Woodfords*	A T Ω House
Pickard, Wilfred Brown, Ce.	*Hopedale, Mass.*	Θ E House

Pope, Morrill Stuart, Ce.	*Machias*	Φ Γ Δ House
Pride, Woodbury Freeman, Ht.	*Auburn*	301 Oak Hall
Randall, Harry Burnham, Ec.	*Milford*	Milford
Richardson, Lester Lary, Ce.	*Old Orchard*	Main St.
Rodick, Eugenia, He.	*Bar Harbor*	University Inn
Rounds, Gerald Arlester, Ce.	*Portland*	Φ H K House
St. Onge, Arthur Amos, Rm.	*Dover*	Δ T Δ House
Sawyer, Allan Frank, Ec.	*Milbridge*	B Θ Π House
Shay, Patrick Henry, Ce.	*Fall River, Mass.*	Θ X House
Sherwood, Neil Carpenter, An.	*Cherryfield*	Park St.
Shields, Victor Hopkins, Ch.	*Vinalhaven*	Φ Γ Δ House
Sinkinson, George Edward, Ec.	*Somersworth, N. H.*	Σ X House
Smith, Leon Campbell, Fy.	*Topsham*	Φ H K House
Sowle, Wesley Atwood, Eh.	*Ellsworth*	Σ A E House
Stevens, Roland Earle, Ht.	*Belfast*	A T Ω House
Sturgis, David William, Ec.	*Gorham*	K Σ House
Thomas, Philip Webb, Ce.	*Portland*	Φ Γ Δ House
Thompson, William Raymond, Ht.	*Bangor*	Θ X House
Tipping, Charles Herbert, Me.	*Claremont, N. H.*	A T Ω House
Towner, Wayland Dean, Fy.	*Bangor*	Σ X House
Wescott, Guy Raymond, Ce.	*Rumford*	Σ A E House
Wilder, Max Lincoln, Ce.	*Augusta*	Σ A E House
Willard, Sherwood Howe, Ee.	*Greenfield, Mass.*	Φ H K House
Wormwood, Carolyn Imogen, Eh.	*Bangor*	Bangor
Youngs, Frederick Shaw, Ce.	*New York, N. Y.*	B Θ Π House

SOPHOMORES

Aageson, Wilbur Cole, Ag.	*Thomaston*	Park St.
Adams, James Abraham, Ms.	*Orono*	35 Mill St.
Allen, Charles Stanley, Ce.	*Augusta*	Σ X House
Bailey, Harold Perry, Ch. Eng.	*Dexter*	B Θ Π House
Baker, Davis Seth, Ce.	*Caratunk*	A T Ω House
Banks, Merton Ford, Ce.	*Biddeford*	Σ A E House
Beale, Douglas Marsh, Ag.	*Orono*	Crosby St.
Bernheisel, George Hench, Ag.	*New Bloomfield, Pa.*	Φ K Σ House
Beverage, Harold Henry, Ee.	*No. Haven*	Σ A E House
Blaisdell, Lawrence Allen, Ee.	*Lynn, Mass.*	Θ Σ House
Boothby, Everett Osgood, Me.	*Gorham*	K Σ House
Bragg, Alfred Orman, Eh. Eng.	*Foxcroft*	310 H. H. Hall
Brennan, James Joseph, Ch. Eng.	*Bangor*	Bangor
Brennan, Rosemary Agnes, Gm.	*Bangor*	Bangor

Brewster, Joseph Evan, Fy.	*Utica, N. Y.*	Φ H K House
Brockway, Earle Maurice, Fy.	*Dexter*	311 H. H. Hall
Brown, Arline Leora, Lt.	*Old Town*	Old Town
Browning, Neva Lenora, Rm.	*Orono*	Orono
Bryant, Robert Hampden, Ec.	*Biddeford*	Φ K Σ House
Caswell, Lester Woodsum, Hy.	*Harrison*	Δ K House
Clark, Robert Pinkham, Ec.	*Lincoln*	Δ T Ω House
Close, Roland Edgerly, Ec.	*Bangor*	Bangor
Coombs, Olive Erdine, Lt.	*N. Islesboro*	College St.
Crandall, James Stuart, Ce.	*Malden, Mass.*	Σ X House
Creighton, Maynard Joshua, Ch. Eng.	*Thomaston*	Φ Γ Δ House
Crimmin, Erlon Victor, Ee.	*Winterport*	Penobscot St.
Crosby, Carle Byron, Ee.	*Bangor*	Σ Δ E House
Davis, Lucretia Almira, Rm.	*Old Town*	Old Town
Dolan, Walter James, Ch.	*Worcester, Mass.*	10 Pine St.
Dole, Margaret, Gm.	*Bangor*	Bangor
Donahue, Norman Sylvester, Ag.	*Luthersburg, Pa.*	K Σ House
Dorsey, Llewellyn Morse, Ee.	*Augusta*	Σ Δ E House
Douglas, Chauncey Hazen, Fy.	*Peabody, Mass.*	111 H. H. Hall
Douglass, Raymond Donald, Me.	*Gorham*	Δ T Δ House
Doyle, Joseph Edward, Fy.	*Danvers, Mass.*	Θ X House
Eales, Frank Henry, Ce.	*Vanceboro*	Δ T Δ House
Easson, Ralph Barrows, Ht.	*So. Paris*	Φ K Σ House
Edminster, Winfred Herbert, Pm.	*Dixmont, R. F. D. No. 1*	310 H. H. Hall
Elliott, Park, Ee.	*Dover*	Σ Δ E House
Emmons, Norman Eudell, Ee.	*Chester, Conn.*	109 H. H. Hall
Fickett, Ernest Leslie, Me.	*Portland*	Θ X House
Fish, Harold Mahlon, Ce.	*Farmington*	Δ K House
Fletcher, Maurice Arthur, Pm.	*Wilton*	Campus
Fletcher, Roland Ezra, Fy.	*Madison*	Θ E House
Fogg, Harry Willard, Fy.	*Hull's Cove*	Θ E House
Fogler, Raymond Henry, Ag.	*West Rockport*	Σ X House
Fowler, Henry Winslow, Fy.	*Berlin, N. H.*	Θ X House
Freese, Frank Drummond, Ec.	*Bangor*	K Σ House
Gerhardts, Emma, He.	*Westbrook*	Mt. Vernon House
Gilman, Madison Leavitt, Ec.	*Anson*	B Θ Π House
Goldsmith, Chester Hamlin, Ch.	*Beverly, Mass.*	Σ X House
Goodwin, Alleyn Maurice, Ee.	*Saco*	K Σ House
Goodwin, Earl Corson, Ec.	*Oakland*	Δ T Ω House

Gordon, Forest Chandler, Ch. Eng.	*Auburn*	403 H. H. Hall
Gowen, John Whittemore, Ag.	*Arlington, Mass.*	301 H. H. Hall
Graves, Justin Dwight, Ce.	*Orono*	Β Θ Π House
Gray, Ethel Mae, Lt.	*Penobscot*	Mt. Vernon House
Hall, Preston Martin, Ch.	*Taunton, Mass.*	Φ Γ Δ House
Hanly, Elizabeth Fitzgerald, Eh.	*Thomaston*	76 Main St.
Haskell, Laurence Herbert, Ce.	*Lynn, Mass.*	406 H. H. Hall
Higgins, Oswald Burnett, Me.	*Sewaren, N. J.*	Κ Σ House
Hight, Vernon Ivan, Ce.	*Caribou*	308 H. H. Hall
Hill, William Barlow, Fy.	*Gorham*	Κ Σ House
Hines, Mary Elizabeth Burns, Lt.	*Middletown, Conn.*	Mt. Vernon House
Hodkins, Harold Eugene, Ee.	*Waterville*	Φ Η Κ House
Hodgins, Laura Pearl, Lt.	*Calais*	Mt. Vernon House
Holyoke, Margaret Lillis, Bl.	*Brewer*	Mt. Vernon House
Howland, Edgar Gordon, Ee.	*Plymouth, Mass.*	Κ Σ House
Hoyt, Ralph William, Ag.	*Waterville*	Φ Γ Δ House
Hutchinson, Albert Fletcher, Ch. Eng.	*No. Dexter*	311 H. H. Hall
Ingalls, Everett Palmer, Ce.	*Bridgton*	Β Θ Π House
Jones, Harold Libby, Ce.	*Corinna*	Φ Η Κ House
Kimball, Roland Gerry, Pm.	*Norway*	Φ Κ Σ House
Leavitt, Harold Walter, Ce.	*Monmouth*	211 H. H. Hall
Lewis, James Henry, Ag.	*Eastport*	Φ Η Κ House
Lindgren, Ray Harrison, Ce.	*Belfast*	Φ Κ Σ House
Luther, Harris Gates, Me.	*Hadlyme, Conn.*	109 H. H. Hall
Lyon, Clement Ames, Ag.	*East Bridgewater, Mass.*	Θ Ε House
McKenney, Maurice Roy, Ee.	*Stillwater*	Stillwater
Mace, Asa Russell, Ce.	*Aurora*	Φ Κ Σ House
Magnus, Carl, Ch. Eng.	*Biddeford*	Θ Ε House
Martin, William Hope, Fy.	*Carlisle, Pa.*	Σ Χ House
Mathews, Norman Lyle, Ag.	*Waterville*	Θ Χ House
Merrill, Gladys Helen, Rm.	*Orono*	Campus
Moore, Robert McGregor, Me.	*Biddeford*	Φ Κ Σ House
Norton, Chester Harold, Fy.	*Chelsea, Mass.*	Θ Χ House
Oak, Malcolm Hayford, Ch. Eng.	*Caribou*	Β Θ Π House
O'Brien, Edward Francis, Ee.	*Lawrence, Mass.*	Β Θ Π House
Parker, Joseph Batchelder, Ag.	*Bangor*	Bangor
Parks, David Weaver, Ps.	*Ft. Fairfield*	211 H. H. Hall
Patten, Mountford Elmes, Fy.	*Carmel, R. F. D., No. 3*	Α Τ Ω House
Peters, Shenton Ashley, Ee.	*Bangor*	Bangor

Pettey, Willis Thurston, Ag.	*Dartmouth, Mass.*	Δ T Δ House
Phelps, Donald Walker, Ag.	*Robbinston*	No. Main St.
Philbrick, John Harvey, Ag.	*Bangor*	Φ H K House
Philbrook, Walker Merriam, Ee.	*Rockport*	201 H. H. Hall
Pierce, Raymond Trussell, Ee.	*Bangor*	Σ A E House
Pinkham, Lloyd Francis, Ee.	*Lewiston*	409 H. H. Hall
Poore, Alice Mildred, Lt.	*Robbinston*	Mt. Vernon House
Randall, Harry Algernon, Ee.	*So. Portland*	Θ E House
Randall, James Stuart, Ce.	*Whitman, Mass.*	Φ Γ Δ House
Redman, William Wason, Ag.	*Dedham, Mass.*	110 H. H. Hall
Rhind, Ethel Knowlton, Lt.	*Bucksport*	Mt. Vernon House
Richardson, Edward Clinton, Ce.	*S. Portland*	Θ E House
Sawyer, Grace Ruth, Lt.	*Old Town*	Mt. Vernon House
Sawyer, Leon George, Ee.	*Bridgton*	102 H .H. Hall
Schwey, Abraham Ira, Fy.	*Portland*	412 H. H. Hall
Searle, Irvin Karsner, Ch.	*Webster, Mass.*	Φ H K House
Shaw, Merle Branard, Ch. Eng.	*Orono*	Θ X House
Sheridan, Philip Brinsley, Ee.	*Salem, Mass.*	Θ E House
Sleeper, Harvey Prescott, Ee.	*Bangor*	Φ K Σ House
Slocum, Paul Frederick, Ce.	*Brooklyn, N. Y.*	Φ Γ Δ House
Smart, Frances Gertrude, Rm.	*Bangor*	217 Elm St.
Stewart, Loren Prescott, Ce.	*Thorndike*	Σ A E House
Thurrell, Robert Freeman, Ee.	*Portland*	Φ Γ Δ House
Titcomb, Harry Alton, Me.	*So. Paris*	Φ K Σ House
Tolman, Lewis Brewster, Ec.	*Bangor*	Bangor
Towle, Horace Hamblen, Jr., Ag.	*Portland*	Φ Γ Δ House
Treworgy, Forrest Reuben, Ee.	*Ellsworth*	209 H. H. Hall
Triplett, Gertrude, He.	*Bangor*	Bangor
Varney, Arthur Freeman, Ce.	*Eastport*	Θ X House
Varney, Ross Harold, Ag.	*Haverhill, Mass.*	Φ K Σ House
Walters, Philip Harris, Ag.	*Readfield*	Campus
Wark, William Lucas, Me.	*Cumberland Mills*	Θ E House
Warren, Paul Alanson, Ag.	*Dover*	Δ T Δ House
Weeks, Jedediah Earle, Ce.	*Wells*	209 H. H. Hall
Welch, Gerald Cushman, Ce.	*Oakland*	A T Ω House
White, Harold Chandler, Ch. Eng.	*Bangor*	K Σ House
Whitney, Thomas Boardman, Ch. Eng.	*Caribou*	408 H. H. Hall
Wilbur, Oscar Milton, Ag.	*Pembroke*	Pine St.
Williams, Harry Duncan, Ce.	*No. Easton*	Σ A E House
Winship, Rachel Helene, He.	*Auburn*	Mt. Vernon House

Woodbury, Newell Brown, Me.	*Beverly, Mass.*	Σ X House
Woodward, George Thomas, Me.	*Lisbon Falls*	Φ H K House
Worcester, Henry Franklin, Ag.	*Old Orchard*	Σ X House
York, Harry Alfred, Ec.	*Salem, Mass.*	B Θ Π House
Young, Mildred May	*Solon*	Mt. Vernon House

FRESHMEN

Abbott, Stephen Boothby, Ce.	*Waterville*	Myrtle St.
Adams, Herbert Kendall, Ag.	*Bowdoinham*	Φ K Σ House
Aikins, Frederick Harlow, Ag.	*Windham*	303 Oak Hall
Ames, Ivan Cecil, Ce.	*North Haven*	110 H. H. Hall
Anderson, Norman William, Fy.	*Freeport*	105 Oak Hall
Ashton, Donald McKecknie, Ee.	*Springfield, Mass.*	Φ Γ Δ House
Atwater, Donald Vince, Ag.	*Ft. Fairfield*	312 H. H. Hall
Austin, Randall Knight, Ce.	*So. Windham, R. F. D. 1*	Park St.
Baird, Elmer Lawrence, Ag.	*Hartland*	Φ Γ Δ House
Ballou, Harold Lewis, Ee.	*Greenfield, Mass.*	Φ H K House
Barrett, Basil Edward, Ec.	*Bluehill*	Σ X House
Barrows, Lewis Orin, Pm.	*Newport*	B Θ Π House
Bartlett, Carroll Arthur, Ag.	*Norway*	309 H. H. Hall
Bartlett, Edson Wells, Ce.	*Bangor*	Bangor
*Bartlett, Ralph Eustis, Ag.	*Rockland*	B Θ Π House
Bayer, Henry Lewis, Ce.	*Bangor*	Park St.
Bell, Roger Warren, Ce.	*Arlington, Mass.*	K Σ House
Billings, Welford Parsons, Fy.	*Eddington*	404 H. H. Hall
Blackman, Charles Leon, Ag.	*Peaks Island*	Park St.
Blanchard, Carl Horatio, Ag.	*Cumberland Center*	Φ H K House
Blanchard, Robert Germain, Ce.	*Cumberland Center*	Δ K House
Blood, Lewis Henry, Ag.	*Foxcroft*	401 H. H. Hall
Bonney, Timothy Doten, Ce.	*Mexico*	Θ X House
Boothby, Horace Everett, Ag.	*Reading, Mass.*	Δ T Δ House
Bower, Arthur John, Ag.	*Methuen, Mass.*	Σ A E House
Brackett, Altie Franklin, Ee.	*Berwick*	A T Ω House
Bradbury, Burke, Ee.	*Old Town*	Old Town
Brown, Brooks, Ag.	*Dover*	Δ T Δ House
Brown, Walter True, Me.	*West Bath*	Main St.
*Bryant, Donald, Eng.	*Bangor*	Bangor
Buckley, Forest, Ce.	*South Leeds*	Park St.
Burke, John Andrew Aloysius, Eng.	*Portland*	401 H. H. Hall
Butters, Arthur Erwin, Ec.	*Old Town*	Old Town

* In partial standing

Caldwell, Warren Sawyer, Ag.	*Madison*	103 H. H. Hall
*Calhoun, Lewis Tracy, Fy.	*Bridgeport, Conn.*	North Main St.
Cate, Don Owen, Ce.	*Dresden*	Δ T Δ House
Causland, Kenneth Martin, Ee.	*Freeport*	105 Oak Hall
Chadbourne, Paul Everett, Me.	*Biddeford*	Φ K Σ House
Chalmers, Arthur Elmer, Ag.	*Albion*	103 H. H. Hall
*Chase, Chauncey Leo, Ce.	*Bangor*	Bangor
Chipman, Merle A., Ch.	*So. Poland*	304 Oak Hall
Clapp, Elwood Irvin, Eng.	*Brewer*	Brewer
Clark, Archie Donald, Ag.	*East Corinth*	203 H. H. Hall
Clark, Wallace Leon, Ee.	*West Sullivan*	208 Oak Hall
Clement, Stephen Caldwell, Ec.	*Belfast*	104 H. H. Hall
Coffin, Everett, Ce.	*Brunswick*	Φ H K House
Coffin, Harold Wilhelm, Ee.	*Portland*	Θ X House
Cohoon, Raymond, Ce.	*Bucksport*	Σ Λ E House
Colbath, Muriel Eva, Eh.	*Hampden*	Hampden
Colbath, Orman Schuyler, Ag.	*Hampden*	No. Main St.
Condon, Guy Berwyn, Ec.	*So. Penobscot*	103 H. H. Hall
Coombs, Harold Elwood, Pm.	*Portland*	Σ X House
Coombs, LeRoy, Gk.	*New York, N. Y.*	Σ Λ E House
Cooper, Allen Bell, Me.	*Worcester, Mass.*	101 H. H. Hall
Cooper, Harold, Me.	*Auburn*	Θ X House
Crimmin, Howard Hollis, Ee.	*Winterport*	Penobscot St.
Currier, Doris, Gm.	*Bangor*	Mt. Vernon House
Currier, Harold Newcomb, Ag.	*Brewer*	Φ K Σ House
Currier, Karl Moody, Ag.	*Brewer*	Φ K Σ House
Curtis, Fred Holmes, Ec.	*Addison*	A T Ω House
Cutler, Clarence Meredith, Ee.	*Medfield, Mass.*	308 Oak Hall
Damren, Fred Llewellyn, Ch.	*Auburn*	104 H. H. Hall
Danforth, Earle Herrick, Ag.	*Bangor*	Bangor
Davis, Arthur Linwood, Ee.	*Auburn*	207 H. H. Hall
Davis, Philip Frank, Ag.	*Island Pond*	No. Main St.
DeBeck, Mary Muriel, Lt.	*Franklin*	University Inn
*Dempsey, Harold Norcross, Ag.	*Stillwater*	Stillwater
DeWitt, Carroll Melbourne, Me.	*Brewer*	210 H. H. Hall
Dingley, Roland Sylvester, Ch. Eng.	*Farmington*	Crosby St.
Dodge, John Maynard, Me.	*Boothbay*	303 H. H. Hall
Dole, Charles Edmund, Me.	*Bangor*	Bangor
Dow, Mildred, Eh.	*So. Portland*	Mt. Vernon House
Driscoll, Michael Columbus, Ec.	*N. Abington, Mass.*	Θ E House
Duffey, Edward Charles, Ch. Eng.	*Rumford*	111 H. H. Hall

* In partial standing

Eddy, Emery Davis, Fy.	*Bangor*	Bangor
Edes, Omar Kelsey, Eng.	*Dexter*	Φ Γ Δ House
Eldridge, Charles Wilson, Ag.	*Foxcroft*	101 H. H. Hall
Elliott, James Carroll, Ag.	*No. Rumford*	402 H. H. Hall
Emerson, Walter Davis, Me.	*Orono*	Park St.
Emery, Charles Irving, Fy.	*Salisbury Cove*	Θ E House
Emery, Clarence Fairfield, Ag.	*Salisbury Cove*	309 Oak Hall
Evans, James Alfred, Ch. Eng.	*Bangor*	K Σ House
Fairchild, Thomas Everett, Ag.	*Livermore Falls*	201 H. H. Hall
Falvey, John Michael, Fy.	*South Berwick*	403 H. H. Hall
Farnham, Frank Paine, Ee.	*New Gloucester*	110 H. H. Hall
Fish, Francis Burnell, Ch.	*Concord, N.*	Oak Hall
Fiske, Howard Vaughn, Ag.	*Rowley, Mass.*	211 H. H. Hall
*Fletcher, Chester Emery, Ag.	*Dryden*	312 Oak Hall
Folsom Charles Herbert, Ce.	*Dexter*	Veazie
Foss, Eugene McAllister, Fy.	*Weston*	310 Oak Hall
Foster, Arthur Leo Livington, Ch. Eng.	*Ellsworth Falls*	302 Oak Hall
Foster, Marie Fredrika, Rm.	*Bar Harbor*	University Inn
Fox, Clyde Calvin, Ag.	*Wilkes Barre, Pa.*	B Θ Π House
Fraser, Elwood Stuart, Ag.	*Peakes Island*	Park St.
*Frawley, Isabel Frances, Rm.	*Bangor*	Bangor
Fricke, Albert Theodore, Fy.	*Bridgeport, Conn.*	Φ K Σ House
Garrison, George Harrison, Ee.	*Portland*	Φ Γ Δ House
Genthner, Roy Harland, Ee.	*Glendon*	301 H. H. Hall
Gerry, Laurel Osgood, Ec.	*Brownville*	Λ T Ω House
Glover, John White, Me.	*Rockland*	Σ X House
Goodwin, Lillis Bina, Eh.	*East Corinth*	Mill St.
Gordon, Augustine Felix, Ce.	*Port-au-Prince, Hayti*	Campus
Gowell, Roger Locke, Ag.	*Auburn, R. F. D. 7*	104 H. H. Hall
Grant, Albert John Minto, Ce.	*Waldoboro*	411 H. H. Hall
Grant, Benjamin Elwell, Ch. Eng.	*Cumberland Mills*	Σ X House
Grant, Philip Burr, Lt.	*Bangor*	Bangor
Greenleaf, Florence Evelyn, He.	*Auburn*	Mt. Vernon House
Grindle, Maynard Charles, Ag.	*Surry, R. F. D. No. 2*	H. H. Hall
Gulliver, James Lucius, Ec.	*Auburn*	B Θ Π House
Hall, Edward True, Jr., Ee.	*St. George*	Park St.
*Hall, Robert Holyoke, Ag.	*Brewer*	H. H. Hall
Hallowell, Melville, Ch.	*Peabody, Mass.*	Θ E House
Ham, Everett Goss, Ch.	*Foxcroft*	402 H. H. Hall
Hamblen, Archelaus Lewis, Ee.	*Gorham*	207 Oak Hall

* In partial standing

Hamel, Leslie Atheson, Ag.	*Portland*	202 Oak Hall
Hamilton, Guy Bradford, Ch. Eng.	*Portland, R. F. D. No. 4*	Δ K House
Hardy, James Edward, Fy.	*Newburyport, Mass.*	Θ X House
Harper, William Chesley, Ee.	*Gardiner, R. F. D. No. 15*	211 H. H. Hall
*Haskell, Ernest Edward, Ee.	*No. Sullivan*	208 Oak Hall
Hatch, Frederic Boynton, Ce.	*Pemaquid Harbor*	301 Oak Hall
Hayford, Herbert Wildes, Gm.	*Dover*	Δ T Δ House
Haynes, Irying Blake, Ec.	*Oakland*	Δ T Ω House
Henderson, George Raymond, Me.	*Pawtucket, R. I.*	Θ X House
Hersey, Thayer Frye, Ag.	*Patten*	K Σ House
*Hickson, Eugene Francis, Ch. Eng.	*Bangor*	Bangor
Hilton, Cecil Max, Ce.	*Greenville*	Φ K Σ House
Hobbs, Albert Cyprian, Ee.	*Norway, R. F. D. No. 2*	309 H. H. Hall
Holden, Frank Benn, Ee.	*Burleigh*	Θ Γ Δ House
Holt, Frank Ashley, Ch.	*Bangor,*	Bangor
Hunt, Lawrence Miliken, Ch.	*Old Town*	Old Town
*Hutchins, Liston Davis, Ag.	*Methuen, Mass.*	Σ A E House
Hutchins, Mollie Davis, Gm.	*Fryeburg*	Mt. Vernon House
Jack, William Sinclair, Ec.	*Pawtucket, R. I.*	Θ X House
Johnson, Seth Allen, Ag.	*East Sullivan*	Δ K House
Jones, Harold Stanley, Fy.	*Belfast*	Δ T Ω House
Jones, Marguerite, He.	*Waldoboro*	University Inn
Jones, Melville Clark, Fy.	*Sabbattus, R. F. D. No. 1*	103 Oak Hall
Jordan, Maynard Fred, Ms.	*Islesford*	204 Oak Hall
Judkins, Eshburn Oscar, Fy.	*Upton*	Park St.
Kelly, Francis Anthony, Fy.	*Andover, Mass.*	Δ T Δ House
*Keyte, William Albert, Ch. Eng.	*Dexter*	309 H. H. Hall
King, William Edward, Bl.	*South Brewer*	K Σ House
Kinney, Guy Leander, Ce.	*Blaine*	109 Oak Hall
Kirk, George Edwin, Ch.	*Bar Harbor*	Θ E House
Kriger, Lewis Herman, Ag.	*Portland*	412 H. H. Hall
Kritter, Julius Henry, Ce.	*Bradford, Mass.*	109 H. H. Hall
Lackee, Hobart Goold, Me.	*Woodfords*	Δ T Δ House
LaCrosse, Waldo Joseph, Bl.	*So. Brewer*	112 H. H. Hall
Lane, Charles Kent, Ch.	*Rockland*	K Σ House
Lawry, Otis Carroll, Ch.	*Fairfield*	B Θ Π House
Leecock, John Thomas, Ch.	*No. Andover, Mass.*	Δ T Δ House
Legal, Chapin, Ag.	*Calais*	101 Oak Hall

* In partial standing

Leonard, Merle, Ch.	*Milo*	Σ A E House
Lewis, Benjamin West, Ee.	*Boothbay Harbor*	B Θ Π House
Lewis, Harold Everett, Ag.	*Lawrence, Mass.*	Σ A E House
Libby, Clarence Earl, Ee.	*Albion*	103 H. H. Hall
Ljungberg, David Graham, Ce.	*Worcester, Mass.*	Δ T Δ House
Loring, Fred Perley, Fy.	*West Pownal*	411 H. H. Hall
Low, Galen Moses, Ag.	*Bath*	Δ T Δ House
Lundquist, Edwin d'Artagnan, Ce.	*Bristol*	305 Oak Hall
McAlister, Royce Delano, Ee.	*Bucksport*	Σ A E House
McAvey, Liela Joyce, He.	*Bangor*	Bangor
Macdonald, Irving Clifford, Ch., Eng.	*Portland*	Φ H K House
McDonough, John Anthony, Ce.	*Lewiston*	Θ X House
McLaughlin, George William, Ms.	*Harrington*	211 Oak Hall
McLaughlin, James Blaney, Ms.	*Harrington*	211 Oak Hall
Mangan, Thomas Gerald, Ce.	*Pittsfield, Mass.*	304 H. H. Hall
Mansfield, Everett Keith, Ch. Eng.	*Fryeburg*	204 Oak Hall
Marshall, Elmer Stanley, Ag.	*Southwest Harbor*	Stillwater
Martin, Blynn, Ch. Eng.	*New Gloucester*	304 H. H. Hall
Mathews, Wilbur Leonard, Ee.	*Berwick*	A T Ω House
Mayers, Howard Winfield, Ce.	*Dresden*	Δ T Δ House
Mayo, Donald King, Ag.	*Southwest Harbor*	204 H. H. Hall
Merchant, Harry Pearl, Ec.	*N. Sullivan*	Σ X House
Merrill, Earl Stephen, Bl.	*Orono*	Campus
Merrill, Philip Knight, Ee.	*Woodfords, R F. D. No. 2*	Δ T Δ House
Moody, Charles Leo, Fy.	*Monmouth*	Park St.
Moore, Ralph Lee, Ce.	*Hallowell*	Σ A E House
Morrell, Lester Howe, Ec.	*Lewiston*	Φ H K House
Morrill, Howard Andrew, Me.	*Saco*	Θ E House
Morris, Lester George, Ag.	*Bingham*	Campus
Morrison, Mildred Cora	*Bar Harbor*	University Inn
Moulton, George Albert, Ce.	*East Bromfield,*	204 Oak Hall
Murray, Lewis Pope, Ch.	*Berlin Mills, N. H.*	Φ Γ Δ House
Myrick, Leroy Henry, Ce.	*East Machias*	303 H. H. Hall
Norris, Helen Mary, He.	*Auburn*	Mt. Vernon House
Noyes, Elwood Austin, Ag.	*Limestone*	Σ X House
Noyes, Garth Albert, Ee.	*Orono*	Forest Ave.
Nugent, William Robert, Eng.	*Portland*	401 H. H. Hall
*O'Neil, Harry Dennis, Ce.	*Bangor*	Bangor
O'Rouke, Francis, Ag.	*Saco*	Bennoch St.

* In partial standing

Packard, Ansel Alba, Ee.	*Belfast*	Oak Hall
Packard, Marlborough, Ce.	*Sebec Lake*	404 H. H. Hall
Palmer, Guy Casley, Ag.	*Patten*	No. Main St.
*Patten, Harvan Burr, Ce.	*Camden*	Λ T Ω House
Peabody, Myron Columbus, Ag.	*Exeter, R. F. D. No. 1*	410 H. H. Hall
Perkins, Edward Adolphus, Ee.	*Old Orchard*	Σ X House
Perkins, Herman Grenville, Pm.	*Madison*	304 H. H. Hall
Perry, Earle Francis, Ag.	*Bangor*	Θ X House
Philbrook, Lawrence Eugene, Ag.	*Shelburne, N. H.*	B Θ Π House
Pierson, Howard Lester, Me.	*Lisbon Falls*	407 H. H. Hall
Plummer, Marion Elizabeth, He.	*Old Town*	Mt. Vernon House
Potter, Elmer Deming, Eh.	*Topsham*	210 H. H. Hall
Prentice, William Henry, Jr., Me.	*Round Pond*	305 Oak Hall
Purington, Clinton Everett, Ag.	*Portland*	K Σ House
Reynolds, Phillip Morton, Fy.	*Machias*	210 Oak Hall
Ripley, Stanley Eddy, Ee.	*East Corinth*	101 H. H. Hall
Robie, Frederick, Ag.	*Gorham*	K Σ House
Robinson, Albert Lealand, Ag.	*So. Windham*	Θ X House
*Robinson, Lewis Avary, Ee.	*Auburn*	College St.
Robinson, Madeline Frances, Rm.	*Bangor*	Bangor
Roderick, Thaddeus Louis, Ch. Eng.	*Farmington*	Crosby St.
Rolfe, Clifford Merrill, Fy.	*Nobleboro*	Campus
Rollins, Harry Elwood, Ag.	*Bangor*	209 H. H. Hall
Rudman, Benjamin William, Ch. Eng.	*Portland*	401 H. H. Hall
Rudman, Samuel, Ce.	*Bangor*	401 H. H. Hall
Ruffner, Charles William, Ag.	*Bangor*	K Σ House
Russell, Sibyl Lois, Bl.	*Orono*	Campus
Sanborn, Oscar Harold, Ag.	*Weld*	Farm House
Sargent, Gooch, Ce.	*Newburyport, Mass.*	305 H. H. Hall
Sawyer, Dwight Leland, Ag.	*Saco*	212 Oak Hall
Sawyer, James Milton, Ce.	*Cumberland Center*	Δ K House
Schneider, Anthony P., Jr., Ag.	*Jersey City, N. J.*	H. H. Hall
Shaw, Earle Eaton, Fy.	*Orono*	College St.
Sherman, Albion Franklin, Ec.	*Bar Harbor*	K Σ House
Sherman, Clifford Parker, Jr., Ag.	*New Bedford, Mass.*	Φ Γ Δ House
Silva, Richard Leslie, Ee.	*Provincetown, Mass.*	Θ E House
Skillin, Clifford Augustus, Me.	*So. Portland*	Θ X House
Small, Norman Clifford, Ee.	*Kingfield*	Peters St.
Smith, George Edwin, Ag.	*Hanover*	403 H. H. Hall

* In partial standing

Somes, Raymond Percival, Fy.	*Southwest Harbor*	204 H. H. Hall
Spear, Harold Farrand, Ag.	*Rockland*	Φ Γ Δ House
Stevens, Guy Herbert, Ag.	*Auburn*	Θ X House
Stone, Harry Edward, Ee.	*Cornish*	Main St.
Storer, Clayton Alton, Me.	*Weld*	409 H. H. Hall
Tarr, Omar Fred, Ch.	*Auburn*	207 H. H. Hall
Thompson, Dorothy, Gm.	*Augusta*	Myrtle St.
Thompson, Frederick Mosher, Fy.	*Orono*	Main St.
*Thompson, Frederick William, Hy.	*Portland*	103 Oak Hall
Thompson, Gladys, Gm.	*Orono*	Main St.
*Titcomb, Alton Crosby, Fy.	*Monticello*	Λ T Ω House
Tobie, Fenton William, Me.	*Lisbon Falls*	407 H. H. Hall
Toole, Harry Sylvester, Ch. Eng..	*Bangor*	Bangor
Totman, James Emmons, Ag.	*Providence, R. I.*	Φ H K House
Trimm, Hattie Mae, Eh.	*East Corinth*	Mill St.
Tufts, Orren, Ee.	*Kingfield*	Peters St.
Vickery, Earle Wendell, Fy.	*Bangor, R. F. D. No. 1*	212 H. H. Hall
Vickery, Emily Josephine, Bl.	*Brewer*	Brewer
Ward, John Patrick, Ag.	*Seawall*	Stillwater
Webber, Walter Waitstill, Ch. Eng.	*Auburn*	402 H. H. Hall
Welch, Donald Stuart, Ag.	*Norway*	309 H. H. Hall
Weymouth, Currier, Ee.	*Kingfield*	Peters St.
Whitney, Raymond Lee, Ag.	*N. Anson*	103 H. H. Hall
Whittier, John Lowell, Ag.	*Biddeford*	Φ K Σ House
*Whittemore, James Arthur, Fy.	*Bangor*	Bangor
Wilbur, Elwood Morton, Ce.	*Sorrento*	Δ K House
Wilkins, Clyde Lamkin, Ag.	*Notch*	409 H. H. Hall
*Willett, Alfred P., Rm.	*Orono*	Hamlin St.
Winship, Evelyn, He.	*Auburn*	Mt. Vernon House
Woodbury, Doris Hall, Rm.	*Brewer*	Brewer
Woods, Basil G., Ch Eng.	*Bangor, R. F. D. No. 7*	Bangor

* In partial standing

SPECIALS

Andrews, Langdon Farrington, Ag.	*N. Fryeburg*	Θ X House
Bagdoyan, Baysar Manoog, Ag.	*Aintab, Turkey*	Campus
Bigelow, Ralph Burrill, An.	*Orono*	Δ K House
Boynton, Guy Leslie, Ag.	*Waltham, Mass.*	Crosby St.
Brown, Olin Chellis, Ee.	*Bar Harbor*	Φ H K House

Chapman, Chauncey Wallace Lord, Fy.	*Old Town*	Δ T Δ House
Cottle, Alfred George, Ag.	*Houlton*	Λ T Ω House
Doore, George Stanley, Fy.	*Dover*	Δ T Δ House
Dunn, Marietta Hoover, Eh.	*Orono*	Mt. Vernon House
Erswell, Charles Sherman, Ch.	*Brunswick*	Θ X House
Fiske, Raymond Houghton, Fy.	*Lincoln*	302 H. H. Hall
Goodwin, Eugene Wiley, Me.	*Rockport*	301 H. H. Hall
Heath, Herbert Milton, Me.	*Augusta*	Σ Λ E House
Higgins, Daniel Ernest, Ht.	*Morrill*	Farm House
Kimball, Everett Augustus, Ht.	*So. Lawrence, Mass.*	Σ Λ E House
Leach, Luther Adelbert, Ee.	*Bar Harbor*	Δ T Δ House
McGinnis, Henry James, Ch. Eng.	*Waterville*	K Σ House
McLaughlin, Percy Daniel, Ag.	*Costigan*	K Σ House
Marsh, Philip Merrill, Ag.	*Farmington*	29 Crosby St.
Masterson, James Edward, Ag.	*Worcester, Mass.*	Σ Λ E House
Melincoff, John Henry, Fy.	*Lawrence, Mass*	412 H. H. Hall
Milliken, William Lawrence, Ec.	*Bridgewater*	Λ T Ω House
Mullaney, James Edward, Ce.	*Somerville, Mass.*	B Θ Π House
Newcomb, Erwin Barrett, Ce.	*Cumberland Mills*	Σ X House
Nickerson, Arno Wilbur, Ch.	*Brewer*	Brewer
Oakes, Lyndon Clare, Eng.	*Newport*	110 H. H. Hall
O'Leary, Madeleine Dolan, Rm.	*Bangor*	Bangor
Phelps, Ferdinand Zanoni, Ch.	*Foxboro, Mass.*	Σ X House
Pierce, Clarence Cheney, Ce.	*Berlin, N. H.*	Θ X House
Reilly, Charles Frederick, Ce.	*Calgary, Alta, Canada*	Θ X House
Richardson, Douglass Leffingwell, Ec.	*McKinley*	K Σ House
Richardson, Howard Byron, Ce.	*Southwest Harbor*	Φ K Σ House
Russell, Asenath Helen, He.	*Orono*	Campus
Shaw, Everett Osborne, An.	*Winterport*	Λ T Ω House
Smith, Royal Howard Gould, Ee.	*Gorham*	H. H. Hall
Studer, John Frederick, Eng.	*Ellsworth*	Oak Hall
Williams, Harry Roscoe, Ag.	*Hodgdon*	112 Oak Hall
York, George James, Hy.	*Yarmouthville*	Θ X House

THE COLLEGE OF LAW

GRADUATE STUDENTS

Allen, George Herman, B. S.	*Portland*
B. S., University of Maine, 1884	

Bass, Frank Lyman, B. A., LL. B. *Bangor* 82 Third St.
Bowdoin College, 1907. University of Maine, 1910

Bowen, Everett Harlow, B. A., M. S., LL. B.
Bangor 53 Fifteenth St.
Colgate University, 1903. University of Maine, 1905. University of Maine, 1912

Boyle, James Louis, B. A., LL. B. *Bangor* 112 Sanford St.
St. Joseph's College, 1906. University of Maine, 1912.

Bridges, Corril Ellsworth, LL. B. *Charlestown, Mass.*
Albany Law School, 1887

Brown, Leon Gilman Carleton, LL. B.
Milo
University of Maine, 1905

Cartier, Arthur Jean Baptiste, LL. B.
Biddeford
University of Maine, 1909

Clough, George Edwin, LL. B. *Palmer, Mass.*
University of Maine, 1904

Cotton, Carl, B. A., LL. B. *Contocook, N. H.*
Colby College, 1900. University of Maine, 1906

Davis, Waldo Trevor, B. A., LL. B. *Worcester, Mass.*
Darthmouth College, 1901. University of Maine, 1905

Dudley, John Perley, LL. B. *Houlton*
Colby College. University of Maine, 1908

Foster, Walter Herbert, LL. B. *Boston, Mass.*
University of Maine, 1905

Frederici, Edmund, LL. B., LL. M. *DuBois, Pa.*
Southern Normal University College of Law

Graton, Claude Dewing, LL. B. *Burlington, Vt.*
University of Maine, 1900

Juchhoff, Frederick, A. M., Ph. D.,
LL. B., LL. D. *Chicago, Ill.*
Kansas City University. Ohio Northern University. Greer College, Illinois

Lemaire, Charles Wendell, LL. B. *Taunton, Mass.*
University of Maine, 1910

Linehan, Daniel Joseph, LL. B. *Haverhill, Mass.*
University of Maine, 1905

Lord, Harry, LL. B. *Bangor* 82 Cumberland St.
University of Maine, 1902

Merrill, Wilbur Frances, LL. B. *Wiscasset*
University of Maine, 1911
Monroe, Edward Roy, LL. B. *Portland*
University of Maine, 1907
Noble, Ernest Eugene, B. A., LL. B. *Portland*
Colby College, 1897. University of Maine, 1903
Perkins, DeForest Henry, Ph. B., M. A., LL. B.
Portland
University of Maine, 1900, 1905. Illinois College of Law, 1906
Record, Lewis Stillman, Ph. B., LL. B.
Newport, N. H.
Brown University, 1902. University of Maine, 1905
Reid, Charles Hickson, LL. B. *Bangor* 60 Lincoln St.
University of Maine, 1903
Robinson, Curville Charles, LL. B. *New York City*
University of Maine, 1905
Seavey, Ernest Linwood, LL. B. *Lemongrove, Cal.*
University of Maine, 1908
Tertzag, Jacob Kevork, A. B. *Lynn, Mass.*
Euphrates, 1902. University of Maine, 1911
Toole, Christopher, LL. B. *Hartford, Conn.*
University of Maine, 1910.
Warren, John Clifford, B. S., LL. B. *Portland*
University of Maine, 1902. Boston University, 1905

SENIORS

Adams, Charles Bayley *Randolph, Vt.* 265 Main St.
Member of the Maine State Bar
Adams, Edward Haven Judge *Portsmouth, N. H.* 166 Union St.
Member of the New Hampshire State Bar
Aiken, Percy Lewis *Sorrento* 25 Spring St.
Barwise, Mark Alton *Bangor* 101 Third St.
Beck, Andrew Jackson *Deer Isle* 265 Main St.
Bove, Bernard Anthony, B. A. *Portland* 124 Third St.
Van Buren College, 1906
Brown, Royden Valentine *Clinton* 396 Hammond St.
Colby College. Member of the Maine State Bar
Chien, Yill C. *Changchow, China* 112 Sanford St.
Bates College
Corliss, Edgar Francis, Jr. *Cumberland* 79 Summer St.

Cowan, Walter Albion Bates College	*Winterport*	166 Hammond St.
Doten, Max Vincent	*Calais*	16 Hudson St.
Dwyer, William Henry University of Maine	*Biddeford*	25 Spring St.
Eaton, Horace Emerson Colgate University. Harvard University	*Bangor*	16 Hudson St.
Gardner, Phillips Brooks Member of the Maine State Bar	*Machias*	183 Cedar St.
Gillin, James McKinnon Member of the Maine State Bar	*Bangor*	119 Pine St.
Kennedy, Michael James	*Woodland*	112 Sanford St.
Roberts, Christopher Shirley	*Vinal Haven*	116 Exchange St.
Rollins, Kenneth Albert, B. A. University of Maine 1909	*Farmington Falls*	7 Boynton St.
Stanley, John William	*Enfield, N. H.*	79 Summer St.
Studley, Ernest Allen Dartmouth College	*Rockland, Mass.*	96 Ohio St.
Turner Erldon Blaisdell	*Augusta*	166 Essex St.
Westgate, Harry Block	*Taunton, Mass.*	28 Second St.

JUNIORS

Bartlett, Charles Drummond Harvard University	*Bangor*	58 Cedar St.
Bird, Walter Judson University of Maine	*Rockland*	173 Ohio St.
Blackington, Carl Adams University of Maine	*Rockland*	64 Center St.
Brown, Lester Edward	*Cape Elizabeth*	396 Hammond St.
Cohen, Samuel	*Bangor*	305 Essex St.
Driscoll, Frank Gerald	*Pentacook, N. H.*	112 Sanford St.
Fisher, Franklin, Ph. B. University of Chicago, 1912	*Lewiston*	113 Jackson St.
Gleszer, Edward Isaac Trinity College. New York University Law School	*Hartford, Conn.*	70 Sanford St.
Goodspeed, Ernest Leroy, B. A. Bowdoin College 1909	*Randolph*	71 Summer St.
Hoar, Ellen Morancy Mary	*Barre, Vt.*	24 Ohio St.
Jewett, Donald Campbell University of Maine. Amherst College	*Cherryfield*	316 Hammond St.

Leonard, Charles Edward	*Haverhill, Mass.*	18 Middle St.
Libby, Frank Milton	*Portland*	112 Sanford St.
Macdonald, Edward Reginald	*Portland*	316 Hammond St.
Mountain, James Barry	*Bangor*	21 Adams St.
Niles, Gladys Madeline	*Bangor*	56 Madison St.
O'Leary, Cornelius Joseph	*Bangor*	96 First St.
Patterson, Arthur Willis	*Castine*	176 Court St.
University of Maine		
Pease, Harvey Roscoe	*Cornish*	40 Court St.
Small, Fred Wakefield	*Steep Falls*	40 Court St.
Towle, James Roby	*Montpelier, Vt.*	176 Court St
Walker, Fred Dudley, Jr.	*Springfield, Mass.*	166 Union St.
Weick, Carl Alfred	*Springfield*	86 Grant St.
Whitney, Clarence Alden	*Portland* Sigma Chi House, Orono	
University of Maine		

FIRST YEAR

Cohen, Ada Migowski	*Bangor*	43 East Summer St.
Donahue, Neal Arland	*Dead River*	25 Spring St.
Douglas, Harry Lawton	*Wimbledon, North Dakota*	166 Union St.
Farr, Bernard Elmer	*Haverhill, Mass.*	265 Main St.
Frost, Clark Bradley	*Mexico*	265 Main St.
Gerrish, Maurice Sylvester	*Melrose, Mass.*	239 Cedar St.
University of Maine		
Glass, Ralph Rigby	*Bangor*	14 Fifth St.
West Point, 1904		
Isaacson, Benjamin	*Auburn*	25 Essex St.
Moody, Howard Clifton	*North Monmouth*	Y. M. C. A. Bldg.
Pettingill, Lawrence Adlai	*Enfield, N. H.*	265 Main St.
Shaw, Harry Maitland	*South Paris*	70 Sanford St.
Sleeper, Roger Davis	*South Berwick*	101 Sanford St.
Southard, Frank Elwyn, A. B.	*Auburn*	148 Kenduskeag Ave.
University of Maine, 1912		
Sukeforth, Raymond Oscar	*Ft. Fairfield*	
University of Maine	Sigma Chi House, Orono	
Taylor, Charles Sumner	*Deer Isle*	261 Grove St.
Tirrill, Frank Adams, Jr.	*Quincy, Mass.*	265 Main St.
Torrey, Merrill Edson	*Easthampton, Mass.*	166 Union St.
Welch, Herbert John	*Portland*	26 Cedar St.

Williams, William Earl Brown University	*Blackington, Mass.*	112 Sanford St.
Woolson, Raymond Trevena	*Lisbon, N. H.*	19 Hudson St.

SPECIALS

Ashworth, George Robert Bowdoin College	*Waldoboro*	139 Center St.
Burns, Joseph Leo	*Taunton, Mass.*	176 Court St.
Cyr, John Alphonse	*Bangor*	243 Center St.
Davis, John Bradford	*Bradford, Mass.*	239 Cedar St.
Dodd, Frederick Beaton	*Bangor*	5 Broadway
Epstein, Myer Wilfred	*Bangor*	303 Essex St.
Ferry, John Timothy	*Bangor*	36 Walter St.
Geary, Milton Roscoe	*Marlboro, Mass.*	12 Carroll St.
Hurley, Martin Francis University of Maine	*Bangor*	50 Walter St.
Keegan, George Joseph St. Mary's College	*Van Buren*	71 Summer St.
Levi, Simon	*Portland*	176 Court St.
McDonald, Peter	*Rumford*	139 Center St.
O'Connor, James Gorman	*Taunton, Mass.*	396 Hammond St.
O'Hear, Hugh Joseph	*Thompsonville, Conn.*	
Seery, William Albert Yale University	*Southport, Conn.*	112 Sanford St. 88 Palm St.
Thayer, Arthur Linwood, B. A. Harvard College, 1904. Harvard Law School	*Bangor*	13 Hayward St.
Whitney, Albert Edward	*Jonesboro*	38 Ohio St.
Wood, Ralph Kimball	*Randolph, Vt.*	145 Center St.
Wood, Walter Shurtleff	*Randolph, Vt.*	145 Center St.

TWO YEARS PHARMACY

SECOND YEAR

Barakat, Zaheeyeh Naoum	*Bangor*	Bangor
Barrett, Woodbury Gates	*Gorham, N. H.*	Σ X House
Brewster, Hugh Maynard	*Dexter*	311 H. H. Hall
Chandler, Sidney Hobart	*Caribou*	308 H. H. Hall
Daviau, Omar	*Waterville*	Δ K House
Gallagher, Wilfred Michael	*Caribou*	410 H. H. Hall
Redman, Edward Sanderson	*Corinna*	Φ H K House

Rogers, Walter Henry	*Topsham*	304 H. H. Hall
Searles, Harold Henry	*Bangor*	Bangor
Turmelle, Wilfred Joseph	*Rochester, N. H.*	Φ H K House

FIRST YEAR

Baldwin, Arthur George	*Reading, Mass.*	Δ T Δ House
Bellows, Orin Kelley	*Barre Plains, Mass.*	112 Oak Hall
Follett, Earl Christie	*Orono*	Orono
Fortier, Francis Edward	*Orono*	37 Broadway
Freeman, Harley Donnell	*Cape Neddick*	106 Oak Hall
Gerry, Bernard Eugene	*Millinocket*	311 Oak Hall
Hillberg, Walter Reynold	*Brockton, Mass.*	K Σ House
Houdlette, Edwin Murray	*Dresden Mills*	College St.
Lynch, Thomas Augustine	*Bangor*	Bangor
Ouilette, Paul	*Caribou*	408 H. H. Hall
Rich, William Raymond	*Gorham*	Δ T Δ House
Rowe, George Eugene	*Milo*	Park St.
Tibbetts, Harold Merrill	*Bangor*	Bangor

HOUSEHOLD ECONOMICS

SECOND YEAR

Barkley, Emma Elizabeth	*Carlyle, Ill.*	Mt. Vernon House
Jackman, Ruth	*Vanceboro*	Mt. Vernon House
Stearns, Luzetta Allen	*Millinocket*	Mt. Vernon House

FIRST YEAR

Clapp, Grace Elizabeth	*Winslow*	Main St.
Dugan, Frances Edith	*Bangor*	Bangor
Dunning, Eva Belle	*Old Town*	Old Town
Flint, Edith	*West Baldwin*	Mt. Vernon House
Goss, Myrtle Sara	*East Corinth*	College St.
Harrigan, Ethel	*Bangor*	Bangor
Leonard, Mary Frey	*Lewiston*	University Inn
Lewis, Alice Marguerite	*Gardiner*	Mt. Vernon House
Niles, Eunice Hale	*Hallowell*	Mt. Vernon House
Park, Minnie May	*Orono*	Pine St.
Ring, Louise Moore	*Orono*	Main St.
Smith, Evelyn Akers	*Andover*	University Inn

SCHOOL OF AGRICULTURE

SECOND YEAR

Barford, John Wallace	*East Chatham, N. Y.*	Park St.
Bates, Lucius Ray	*Westboro, Mass.*	Park St.
Berce, Woodbury Lee	*Caribou*	410 H. H. Hall
Boothby, Harold Floyd	*Maplewood*	Campus
Carle, Leon Percy	*No. Raymond*	Φ Γ Δ House
Dodge, Leon Augustine	*So. Newcastle*	Park St.
Farrar, Carl DeWees	*Lynn, Mass.*	406 H. H. Hall
Fuller, Nelson Edward	*Livermore Falls*	Campus
Gray, George Edwin	*Anson*	Campus
Jones, Martin Ernest	*Nashua, N. H., R. F. D. No. 3*	Campus
Leary, James Augustus	*East Hampden*	Campus
Leusher, Herbert Lockwood	*Cambridge, Mass.*	Oak Hall
McCloy, Robert Bruerton	*Eden Center, N. Y.*	Φ Γ Δ House
Merrill, Lawrence Otho	*Mechanic Falls*	109 H. H. Hall
Morse, Leppien William	*Upton*	Park St.
Morrison, Walter Ellis	*Braintree, Mass.*	402 H. H. Hall
Murphy, Alonzo Michael	*Sandwich, Mass.*	Α Τ Ω House
Richardson, Arthur Waterhouse	*Old Orchard*	Main St.
St. Clair, Melvin Henry	*Owl's Head*	Park St.
Sawyer, Elmer Frederick	*North Saco*	212 Oak Hall
Snow, Albert Henry	*Bucksport*	Θ Χ House
Snow, Everett Aaron	*Lawrence, Mass.*	Σ Α Ε House
Tarbox, Earle Wentworth	*Saco*	Campus
Wadsworth, Carroll Benton	*Cornish*	Park St.
West, Thomas Rose	*Saco, R. F. D.*	Campus
Woodman, Philip Furness	*Biddeford*	201 Oak Hall

FIRST YEAR

Berry, Arnold Parker	*Portsmouth, N. H.*	202 Oak Hall
Bradford, Alden Western	*Sebec Station*	Park St.
Burke, Albert Francis	*Millinocket*	111 H. H. Hall
Gray, Frank William, Jr.	*Jacksonville*	303 H. H. Hall
Greger, Max Charles	*Port-au-Prince, Hayti*	Farm House
Hawkes, John Carroll	*South Windham*	303 Oak Hall
Hill, Harold Merrill	*Garland*	Penobscot St.
Johnson, Joseph Henry	*Waltham, Mass.*	Main St.
Johnston, William Staples	*Washington*	206 Oak Hall

Kendrick, Frank Carroll	*Biddeford*	204 H. H. Hall
Lincoln, Lionel Gilman	*Charleston, R. F. D. No. 1*	Penobscot St.
MacIntire, Donald Josiah	*Biddeford*	201 H. H. Hall
Shaw, Harold Joseph	*Sanford*	409 H. H. Hall
Small, Sylvanus Cobb	*Charleston*	Farm House
Talbot, Jones Harold	*East Machias*	209 Oak Hall
Thomas, George Elliott	*Lynn, Mass.*	H. H. Hall
Verrill, Floyd	*Brunswick*	Crosby St.
Ward, Linton Bartlett	*Shirley, Mass.*	411 H. H. Hall
Wells, Clayton Meader	*Shirley, Mass.*	411 H. H. Hall
Wilcox, Carroll Eugene	*Morgan, Vt.*	203 Oak Hall
Wilcox, Clyde Sumner	*Morgan, Vt.*	203 Oak Hall

SUMMER TERM

Ackley, Edward Preble	*Peaks Island*
Aldrich, Bertha Evelyn, A. B.	*Westboro, Mass.*
Alister, Lillian Elizabeth Lowell University	*Lowell, Mass.*
Banfield, Stanley Mirick	*Worcester, Mass.*
Barker, Corinne Maude	*Bangor*
Beale, Douglas Marsh	*Orono*
Bickford, Miretta Lydia	*Skowhegan*
Boothby, Everett Osgood	*Gorham*
Boothby, Horace Everett, Jr.	*Reading, Mass.*
Brackett, Ruth Frances	*Warren, R. F. D.*
Brooks, James Strothard	*So. Brewer*
Burgess, Howard	*No. Vassalboro*
Burghart, Lloyd Meeks, B. A. Lake Forest College	*Orono*
Cannon, Arthur Hildreth	*Orono*
Clement, Esther Racide	*Milford*
Conners, Edward Warren	*Great Works*
Cottle, Alfred George	*Houlton*
Coughlin, Edward Thomas	*Holyoke, Mass.*
Cousins, Irene, B. A. University of Maine, 1911	*Old Town*
Cushman, William Parsons	*West Pownal*
Danforth, Earle Herrick	*Bangor*
Day, George Willis, B. S. Dartmouth College, 1895	*East Waterboro*

Dolan, Walter James	*Worcester, Mass.*
Dole, Charles Edmund	*Bangor*
Dorsey, Llewellyn Morse	*Augusta*
Dunn, Marietta Hoover	*Orono*
Dyer, Guy Valentine	*Calais*
Fickett, Ernest Leslie	*Brewer*
Fillmore, Annie May	*South Cushing*
Fisher, Arthur LeRoy	*Winchester, N. H.*
Franklin, Isabel Wood	*Philadelphia, Penna.*
Geary, Milton Roscoe	*Marlboro, Mass.*
Gilbert, William Henry, B. A. University of Maine, 1909	*Milo*
Goodwin, Fred Gilman	*Charleston*
Gowen, John Whittemore	*Arlington, Mass.*
Grant, Imogene Earle	*Sedgewick*
Gray, Ernest Linwood	*Mars Hill*
Groves, Walter Clyde	*Camden*
Gulliver, James Lucius	*Auburn*
Hamlin, George Harold	*Orono*
Haskell, Clara Louise	*Steuben*
Haskell, Weston Bradford	*Auburn*
Heath, Herbert Milton	*Augusta*
Herrick, Amelia	*Charleston*
Herschel, Winslow Hobart, A. B. Harvard Unversity, 1896	*Orono*
Hersey, Thayer Frye	*Patten*
Hettinger, Frederick Carl	*Rosindale, Mass.*
Hobart, Aileene Browne	*Milford*
Hodgdon, Gladys Louise	*Bangor*
Hodges, Ralph Condon	*Richmond*
Holmes, Adrian Emery	*Buckfield*
Holt, Frank Ashley	*Bangor*
Holway, Charles Josiah	*Madison*
Hopkinson, Ralph Stimson	*Saco*
Huggins, Leslie Mansfield	*Malden, Mass.*
Huntington, Richard Thomas	*Augusta*
Johnson, Seth Allen	*East Sullivan*
Jones, Gertrude May, B. S. University of Maine, 1906	*Corinna*
Jose, Frances Elizabeth, A. B., A. M. Maine Wesleyan College, 1893, 1897.	*Dexter*

Krstein, Augusta Prinz	*Bangor*
Latno, Arthur	*Bradley*
Leach, Luther Adelbert	*Bar Harbor*
McManus, Margaret Ellen, B. A. University of Maine, 1911	*Bangor*
MacSkimmon, Anna Mae	*Bangor*
Masterson, James Edwin	*Worcester, Mass.*
Merrill, William Hammond	*Bangor*
Monroe, Maude Evelyn	*Bangor*
Morrell, Lester Howe	*Lewiston*
Newcombe, Alfred Watts	*Thomaston*
Newman, George Burgess	*Fryeburg*
Oakes, Lyndon Claire	*Newport*
Page, Edwin Richard	
Parlin, Amber Lorene, A. B. Bates College, 1904	*Bradley*
Pierce, Henry Otis	*Bangor*
Pinkham, Seymour Leroy	*Portland*
Richardson, Douglas Leffingwell	*McKinley*
Richardson, Helen	*Strong*
Richardson, Howard Byron	*Southwest Harbor*
Reilly, Charles Frederick	*Calgary, Alberta, Canada*
Romeo, Manuel Custodio	*Bangor*
Salley, Erna Bickford	
Sawyer, Allan Frank	*Millbridge*
Sawyer, Grace Ruth	*Old Town*
Schwey, Abram Ira	*Portland*
Shohet, David Manheim	*Portland*
Shorey, Albert	*Surrey*
Skelton, William Freemont	*Friendship*
Small, Lottie Jean	*Stonington*
Small, Nathan Houston	*Belfast*
Smith, Oscar Samuel	*Orono*
Stanton, Augusta Emily Haselton	*Great Neck, N. Y.*
Stinchfield, Florence Ruth	*Danforth*
Strout, Colon Berward	*Milbridge*
Thompson, Frederic William	*Augusta*
Thorne, Caroline Warner	*Philadelphia, Penna.*
Tibbetts, Elsie Dorothea	*Bangor*
Tibbetts, William Herbert	*Bangor*
Tilley, Glenwood Goding	*Ashland*

Triplett, Gertrude	*Bangor*
Urann, Eugene	*East Sullivan*
Walters, Philip Jenry	*Readfield*
Ward, Clayton Melcher, A. B. Colby College, 1907	*Portland*
Webber, Ella Cynthia	*Mt. Vernon*
Webber, Elmer Harrison	*Mt. Vernon*
Wescott, Guy Raymond	*Rumford*
Whitehouse, Earl Hayes	*Dover, N. H.*
Wright, Laurence Norman, A. B., Bates College, 1907.	A. M. Brown University, 1908 *Auburn*
Wight, Nathan Eliphalet	*Las Animus, Colo.*
Willett, Alfred P.	*Orono*
York, George James	*Yarmouthville*
York, Harry Alfred	*Mars Hill*

SHORT COURSES

DAIRYING AND GENERAL AGRICULTURE

Banks, L. G.	Bangor	Jacobs, I.	Caribou
Beedy, H.	Bowdoinham	Leighton, M.	Calais
Birtwell, W. M.	Danforth	Moody, R. M.	No. Monmouth
Boynton, E. W.	NorthBerwick	Morrison, L. E.	Lagrange
Buck, P. H.	Caribou	Noyes, R. P.	Wilton
Carle, P.	Princeton	Paul, L. A.	Morrill
Chase, E.	Solon	Patten, R. T.	Skowhegan
Crocker, E.	St. Albans	Potter, F. A.	Old Town
Crocker, G. C.	St. Albans	Riley, W. H.	Livermore Falls
Danforth, H. E.	Old Town	Robinson, W. F.	Bowdoinham
Foss, H. C.	Mapleton	Searles, J. M.	Brownville
Fox, H.	Caribou	Tiplady, L. F.	E. Corinth
Gee, A. H.	Lewiston	Vance, N.	Caribou
Grant, A. D.	Sangerville	Willard, M.	E. Monmouth
Hilton, W. A.	No. Cornville	Wyman, J. M.	Norway
Humphries, A. C.	Perry	Young, M. D.	Manchester
Hutchinson, H. F.	Buxton Center		

HORTICULTURE

Birtwell, W. M.	Danforth	Humphries, A. C.	Perry
Blaisdell, A. L.	Winterport	Noyes, R. P.	Wilton

Boynton, E. W.	North Berwick	Page, E. E.	East Corinth
Chase, T. E.	Auburn	Palmer, G. L.	Kents Hill
Colby, J. W. S.	South Paris	Peters, A. B.	Bangor
Conant, W. H.	Buckfield	Potter, H. A.	Calais
Cummings, R. L.	West Paris	Prescott, V. L.	Rockland
Davis, H. W.	Oxford	Rogers, J. S.	North Newburgh
Day, C. A.	Presque Isle	Sanborn, H. I.	Wilton
Foss, H. C.	Mapleton	Searles, J. M.	Brownville
Fowler, E. W.	South Brewer	Smith, G. P.	Bangor
Gardiner, R. H.	Gardiner	Taylor, L. L.	Presque Isle
Gee, A. H.	Lewiston	Wheeler, C. E.	Chesterville
Hardy, W. M.	Brewer	Weston, V. A. J.	Farmington
Heath, G. K.	Readfield	Wyman, J. M.	Norway
Herschel, C. A. F.	Orono		

POULTRY HUSBANDRY

Abbott, G. H.	Brookline, Mass.	Longfellow, L. N.	Orono
Birtwell, W. M.	Danforth	Milliken, F. P.	Peterboro, N. H.
Chalmers, C. N.	Albion	Peters, W. C.	Bangor
Colby, J. W. S.	South Paris	Roulston, G. C.	Boston, Mass.
Frost, W. P.	Dorchester, Mass.	Taylor, L. L.	Presque Isle
Gee, A. H.	Lewiston	Thomas, C. S.	North Islesboro
Hurley, J. C.	Fall River, Mass.	Thompson, W. E.	Howland
Hutchinson, H. F.	Buxton Center	Weston, V. A. J.	Farmington
Jones, L. B.	Bangor	Young, M. D.	Manchester
Leighton, M.	Calais		

AGRICULTURE, RURAL AND SOCIAL ECONOMICS

Ayer, W. O.	Kenduskeag	Newton, J. E.	New Haven, Ct.
Ames, L. W.	Newport	Pratt, W. L.	Brewer
Cousins, E. M.	Old Town	Purdy, C. A.	Orrington
Coy, J. B.	Harrison	Sauer, G. C.	Bangor
Harbutt, C. M.	Portland	Smith, C. V.	Bradley
Harris, J. W.	Augusta	Snow, F. A.	Old Town
Harvey, O. M.	Kenduskeag	Spear, S. G.	Dexter
Heald, A. A.	Waterville	Thomas, A. M.	Farmington
Johnson, S. A.	E. Sullivan	Webber, E. H.	Mt. Vernon
Jose, F. E.	Dexter	Welch, H. W.	Bucksport
Lyman, J. B.	Orono	Whitcomb, S. C.	Bangor
McClure, R. W.	Veazie	Wilson, D. L.	Belfast

Mower, I. B.	Waterville	Young, C. E.	W. Enfield
Perkins, D. H.	Portland		

Enrolled after 1911-1912 catalog was printed:

SENIORS

Pond, Ralph Benjamin, Ee.	*Eau Claire, Wis*	Φ Γ Δ House
Wakefield, Oscar Abel, Ce.	*Andover*	Φ K Σ House

JUNIORS

Barbour, Bentley Leon, Ec.	*Kenesha, Wis.*	Σ X House
Blanchard, Franklin Roy, Ec.	*Beverly, Mass.*	Campus
Worden, George Newton, Ag.	*Vanceboro*	Δ T Δ House

GENERAL SUMMARY

FACULTY

President	1
Professors	38
Associate Professors	13
Assistant Professors	10
Instructors	34
Tutors and Assistants	5
Lecturers	5
Additional Instructor in the Summer Term	1
Total	107
Other Officers	24
College of Agriculture	21
College of Arts and Sciences	42
Agricultural Experiment Station	14
College of Law	10
College of Technology	24
Officers common to all Colleges	7
	118
Duplicated	11
	107

STUDENTS

Graduate Students	20
Seniors	88
Juniors	114
Sophomores	137

General Summary

Freshmen		261
Specials		38
College of Law Graduate Students	29	
Seniors	22	
Juniors	24	
First Year	20	
Specials	19	114
Two Years Course in Pharmacy Second Year	10	
First Year	13	23
Two Years Course in Home Economics		
Second Year	3	
First Year	12	15
School Course in Agriculture		
Second Year	25	
First Year	21	46
Summer Term		111
Winter Courses		
Dairying and General Agriculture	33	
Horticulture	31	
Poultry Husbandry	19	
Rural and Social Economics	27	110
Enrolled after 1911-12 Catalog was printed		5
		1082
Duplicates		71
Total		1011

CLASSIFICATION BY RESIDENCE

Maine, by counties:	
Androscoggin	47
Aroostook	31
Cumberland	96
Franklin	26
Hancock	52
Kennebec	51
Knox	28
Lincoln	15
Oxford	42
Penobscot	261
Piscataquis	24

Sagadahoc	10	
Somerset	20	
Waldo	19	
Washington	40	
York	42	804
California	1	
Colorado	1	
Connecticut	11	
Illinois	2	
Indiana	1	
Massachusetts	124	
New Hampshire	25	
New Jersey	2	
New York	11	
North Dakota	1	
Pennsylvania	8	
Rhode Island	4	
Vermont	9	
Wisconsin	2	202
Canada	1	
China	1	
Hayti	2	
Turkey	1	5
		1011

CLASSIFICATION BY COLLEGES

College of Agriculture	356	
College of Arts and Sciences	187	
College of Law	114	
College of Technology	354	
		1011

CLASSIFICATION OF CANDIDATES FOR DEGREES

College of Agriculture	182	
College of Arts and Sciences	129	
College of Law	95	
College of Technology	341	
		747

INDEX.

	PAGE
Absence from examinations	41
Administration, officers of	9
Advanced standing	49
Admiralty	155
Admission	49
to College of Law	155
Agricultural Chemistry	93
Agricultural Engineering	94
Agricultural Experiment Station	200
Council	3
Agriculture, College of	68
Agronomy courses	87
curriculum	71
Alpha Zeta	37
Alternating currents	187
Alumni Advisory Council	208
Alumni associations	209
Animal Industry courses	88
curriculum	72
Anthropology	113
Appointments	211
Archaeology	128
Architecture	132
Art	107, 131
Art Museum	34
Arts and Sciences, College of	103
Associations	35
Astronomy	138
Athletic field	31
Bacteriology	92
Battalion	212
Bibliography	108
Biological Chemistry	93
Biology courses	108
entrance	62
Botany	110
Buildings and equipment	22
Business Law	112
Calendar	3
Central heating plant	31
Cercle Francais	36
Certificate, admission by	51
Certificate Board	51
Certificates in Agriculture	82
Chemical Engineering curriculum	161
Chemistry courses	177
curriculum	163
entrance	62
Civil Engineering courses	182
curriculum	165

	PAGE
Classical curricula	106
Commencement exercises, 1912	214
Committees of the Faculty	17
Cookery	98
Correspondence courses	85
Criminal Law	156
Curricula	64
Agriculture	70
Agronomy	71
Animal Industry	72
Chemistry	163
Chemical Engineering	161
Civil Engineering	165
Classical	106
Electrical Engineering	168
Forestry	76
Graduate	106
Home Economics	78
Horticulture	73
Law	155
Mechanical Engineering	171
Pharmacy	173
Special	49
Dairy courses	88
Winter courses	83
Debate	120
Declamations	120
Sophomore prize	47, 120
Degrees	42
advanced	43
Degrees conferred, 1912	214
Deposits	46
Dormitories	45
Drawing	194
Economics	112
Education courses	115
Ethnology	113
Electrical Engineering courses	187
curriculum	168
Embryology	109
Endowment of the University	22
English courses	117
entrance	54
English Literature	127
Entomology	110
Entrance	49
Essays	118
Establishment of the University	19
Ethics	142
Evidence	156
Examinations, arrearage	41
entrance	50
Expenses	44, 154
Experiment Station	200
Extension Work in Agriculture	84
Faculty, University	10
Agriculture	68
Arts and Sciences	103
Experiment Station	200
Law	152
Technology	160
Farm Management	94
Fees, laboratory	45
Forestry courses	96
curriculum	76

Index

	PAGE
Fraternity houses	31
French courses	147
entrance	56
Geological collection	33
Geology	94
Junior exhibition	47
speakers, 1912	211
Kidder scholarship	47
Kittredge loan fund	46
German courses	126
entrance	58
Gothic	127
Graduate curricula	106
Graduation, requirements for	65
Greek courses	128
Greek architecture	132
Gymnasium	39
Herbarium	33
Histology, Animal	109
Plant	110
History courses	132
entrance	63
Home Economics courses	98
curriculum	78
short courses	80
Honorary societies	36
Honors	41
Conferred, 1912	211
Horticulture courses	101
curriculum	73
Hydraulics	184
Income of the University	22
Industrial Chemistry	179
Infirmary	30
Insurance	157
International Law	113
Junior exhibition	47
speakers, 1912	211
Kidder scholarship	47
Kittredge loan fund	46
Laboratory charges	45
Landscape Gardening	102
Latin	134
Law, College of	152
Least Squares	146
Lectures, Summer Term	206
Library	26, 32
Loans	46
Logic	143
Lumbering	97
Machine Design	193
Maine Masque	36
Major instructors	105
Materia Medica	196
Mathematics courses	137
entrance	61
Mechanical Engineering courses	190
curriculum	171
Mechanics	195
Mechanics and Drawing	194
Medicine, preparation for	106
Meteorology	145
Military Science	38
courses	199
Museum	33
Observatory	27
Optics	145
Organic Chemistry	178

	PAGE
Organization of the University	64
Organizations	35
Pedagogy	115
Pharmacy	195
curricula	173
Phi Kappa Phi	36
members	211
Philosophy	143
Physical Chemistry	180
Physical Geography	63
Physical Training	39
courses in	200
Physics courses	144
entrance	63
Physiology	109
Political Economy	112
Poultry Husbandry courses	90
Power House	31
Prescriptions	196
Prizes	47
awarded, 1912	212
Psychology	142
Public Speaking	119
Publications	37
Reading room	32
Regulations of the University	40
Reports of standing	41
Required courses	65
Requirements, for admission	49
for graduation	65
Rhetoric	118
Romance Languages	147
Roman Epigraphy	136
Roman Numismatics	137
Roman Philosophy	135
Rooms	45
Round Table	36
Rule of conduct	40
Sanitary Engineering	183
Sanskrit	136
Scholarship honors	41
Scholarships	47
School Course in Agriculture	81
Sewing	99
Short Courses in Agriculture	83
Silviculture	96
Societies	35
Sociology	112
Sophomore prize declamations	47, 120
speakers, 1912	211
Spanish	149
Special courses	81
Special students	49
Steam Engineering	193
Students, catalog of	221
classification of	253
number of	252
standing of	41
Studies, quota of	41
Structures	184
Summer Term	205
expenses	207
Surveying	182
Tau Beta Pi	37
Technology, College of	160
Faculty	160
Theology, preparation for	106
Theses	44

Index

	PAGE
Torts	158
Treasurer	9
Trustees, Board of	7
executive committee of	7
Tuition Charges	44
University History	19
Buildings and equipment	22
Bulletins	37
Endowment	22
Establishment	19
Location	22
Object	19
Organization	64
Veterinary Science	93
Winter courses	83
Woodwork	190
Women, admission of	49
Worship, public	40, 206
Young Men's Christian Association	36
Young Women's Christian Association	36
Zoology courses	109
collections	33

ucd
378.741
M1+1

THE MAINE BULLETIN

VOL. XVI OCTOBER, 1913 NO. 2

E 77

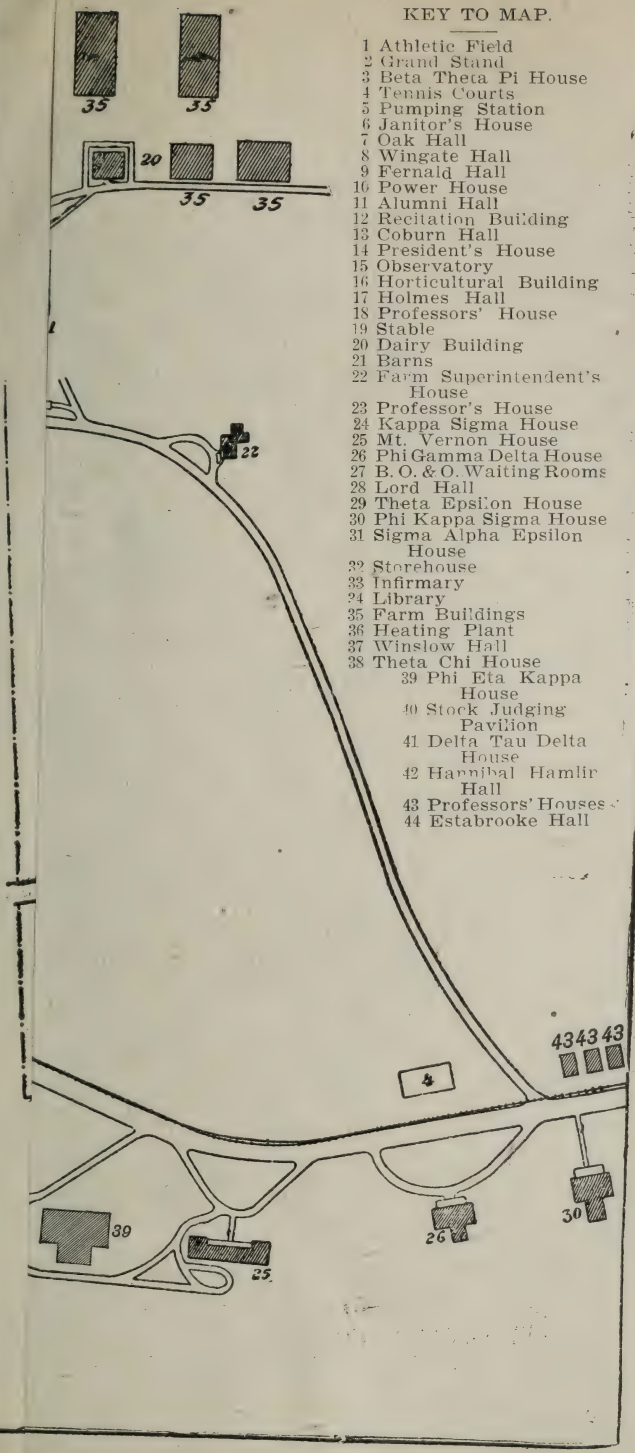
CATALOG

OF THE

UNIVERSITY OF MAINE

1913-1914

Published monthly during the academic year by the University
Entered at the Orono post office as second class matter


KEY TO MAP.
1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' House
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 Estabrooke Hall
35
35
20
35
35
22
43 43 43
4
39
25
26
30

KEY TO MAP
1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Recitation Building
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' House
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. & O. Waiting Rooms
28 Lord Hall
29 Theta Epsilon House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Storehouse
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 Delta Tau Delta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 Estabrooke Hall
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1913-1914

ORONO, MAINE

Printed for the University
SENTINEL PUBLISHING COMPANY
WATERVILLE, MAINE
1913

1913

JULY

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..
..	..	..	..	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	..	..	1
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

NOVEMBER

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

1914

JANUARY

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
..	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	..	..

MAY

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..

1914

JULY

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

1915

JANUARY

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..

MAY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

CALENDAR

FALL SEMESTER, 1913

September 12-16 inclusive		Arrearage examinations
September 12-16 inclusive		Entrance examinations
September 17,	Wednesday,	Registration begins, 8.00 A. M.
September 18,	Thursday,	First chapel, 11.00 A. M.
October 12,	Sunday,	Columbus Day
October 13,	Monday,	A holiday
November 26,	Tuesday,	Meeting of the Board of Trustees
November 26,	Wednesday,	Thanksgiving recess begins, 12.00 M.
December 1,	Monday,	Thanksgiving recess ends, 1.30 P. M.
December 12,	Friday,	Sophomore prize declamations
December 20,	Saturday,	Christmas recess begins, 12.00 M.

1914

January 5,	Monday,	Christmas recess ends, 1.30 P. M.
January 30,	Friday,	Fall semester ends, 12.00 M.

SPRING SEMESTER, 1914

January 31,	Saturday,	Registration, 8.00 A. M-12.00 M.
February 2,	Monday,	Spring semester begins, 8.00 A. M.
February 2,	Monday,	Copy of junior exhibition orations to be deposited with the Registrar
February 22,	Sunday,	Washington's Birthday
February 23,	Monday,	A holiday
March 28,	Saturday,	Spring recess begins, 12.00 M.
April 6,	Monday,	Spring recess ends, 1.30 P. M.
April 19,	Sunday,	Patriots' Day
April 20,	Monday,	A holiday
May 1,	Friday,	Outline of theses to be passed to the major instructor

May	1,	Friday,	Harrington prize essays to be deposited with the Registrar
May	20,	Wednesday,	Theses of candidates for advanced degrees to be deposited
May	30,	Saturday,	Memorial Day, a holiday
June	1,	Monday,	Complete theses to be deposited by 12.00 M.
June	3-6,		Entrance examinations
June	3,	Wednesday,	8.00 A. M. Algebra
			10.00 A. M. Chemistry
			Botany
			1.30 P. M. Latin
			4.30 P. M. Roman History
June	4,	Thursday,	8.00 A. M. Solid Geometry
			10.00 A. M. French
			German
			1.30 P. M. English
			4.30 P. M. English History
June	5,	Friday,	8.00 A. M. American History and Civil Government
			Trigonometry
			10.00 A. M. Plane Geometry
			1.30 P. M. Physics
June	6,	Saturday,	8.00 A. M. Greek
			Physiology
			10.00 A. M. Greek History
			1.30 P. M. Physiography
June	7,	Sunday,	Baccalaureate address
June	8,	Monday,	Class day
			Reception by the President
June	9,	Tuesday,	Meeting of the Board of Trustees
			Commencement dinner
			Alumni luncheon; alumnæ luncheon
			Meeting of the Alumni Association
June	10,	Wednesday,	COMMENCEMENT

SUMMER TERM

July	6,	Monday,	Summer Term begins
August	14,	Friday,	Summer Term ends

FALL SEMESTER, 1914

September 11-15,		Arrearage examinations
September 11-15,		Entrance examinations
September 11,	Friday,	8.00 A. M. Algebra
		10.00 A. M. Chemistry
		Botany
		1.30 P. M. Latin
		4.30 P. M. Roman History
September 12,	Saturday,	8.00 A. M. Solid Geometry
September 12,	Saturday,	10.00 A. M. French
		German
		1.30 P. M. English
		4.30 P. M. English History
September 14,	Monday,	8.00 A. M. American History and Civil Government
		Trigonometry
		10.00 A. M. Plane Geometry
		1.30 P. M. Physics
September 15,	Tuesday,	8.00 A. M. Greek
		Physiology
		10.00 A. M. Greek History
		1.30 P. M. Physiography
September 16,	Wednesday,	Registration begins, 8.00 A. M.
September 17,	Thursday,	First chapel, 11.00 A. M.
October 12,	Monday,	Columbus Day, a holiday
November 24,	Tuesday,	Meeting of the Board of Trustees
November 25,	Wednesday,	Thanksgiving recess begins, 12.00 M.
November 30,	Monday,	Thanksgiving recess ends, 1.30 P. M.
December 11,	Friday,	Sophomore prize declamations
December 19,	Saturday,	Christmas recess begins, 12.00 M.

1915

January 4,	Monday,	Christmas recess ends, 1.30 P. M.
January 29,	Friday,	Fall semester ends, 12.00 M.

SPRING SEMESTER, 1915

January 30,	Saturday,	Registration, 8 A. M.-12.00 M.
February 1,	Monday,	Spring semester begins, 8 A. M.
June 9,	Wednesday,	COMMENCEMENT

CALENDAR OF THE COLLEGE OF LAW

1913

October 8, Wednesday, Fall term begins
December 24, Wednesday, Fall term ends

1914

January 7, Wednesday, Winter term begins
March 18, Wednesday, Winter term ends
March 25, Wednesday, Spring term begins
June 10, Wednesday, COMMENCEMENT
October 7, Wednesday, Fall term begins
December 23, Wednesday, Fall term ends

1915

January 6, Wednesday, Winter term begins
March 17, Wednesday, Winter term ends
March 24, Wednesday, Spring term begins
June 9, Wednesday, COMMENCEMENT

BOARD OF TRUSTEES

Hon. SAMUEL WADSWORTH GOULD, B. S., President	Skowhegan
Term expires April 16, 1914	
EDWIN JAMES HASKELL, B. S.	Westbrook
Term expires December 31, 1913	
Hon. SUMNER PETER MILLS, Clerk	Farmington
Term expires September 10, 1914	
JOHN MARSHALL OAK, B. S.	Bangor
Term expires April 2, 1915	
Hon. CHARLES LESTER JONES	Corinna
Term expires April 17, 1917	
FREELAND JONES, LL. B.	Bangor
Term expires May 31, 1918	
Hon. WILLIAM ROBINSON PATTANGALL, M. S.	Waterville
Term expires April 13, 1919	
WILLIAM ALBERT MARTIN	Houlton
Term expires May 7, 1920	

EXECUTIVE COMMITTEE

Trustees GOULD, OAK, and F. JONES

FARM COMMITTEE

Trustees F. JONES, C. L. JONES, and MARTIN

MAINE AGRICULTURAL EXPERIMENT STATION COUNCIL

ROBERT JUDSON ALEY, PH. D., LL. D. — *President*
CHARLES DAYTON WOODS, Sc. D. — *Secretary*
FREELAND JONES, LL. B., Bangor
CHARLES LESTER JONES, Corinna
WILLIAM ALBERT MARTIN, Houlton
LEON STEPHEN MERRILL, M. D., Orono
— *Committee of Trustees*

Dean of the College of Agriculture
JOHN ALBERT ROBERTS, M. A., Norway

Commissioner of Agriculture
EUGENE HARVEY LIBBY, Auburn — *State Grange*

ROBERT HALLOWELL GARDINER, Gardiner
State Pomological Society

RUTILLUS ALDEN, Winthrop — *State Dairymen's Association*

WILLIAM GEORGE HUNTON, Readfield
Maine Seed Improvement Association

WILLIAM HENRY DAVIS, Augusta
Maine Livestock Breeders' Association

JAMES MONROE BARTLETT, M. S.
EDITH MARION PATCH, PH. D.
WARNER JACKSON MORSE, PH. D.
RAYMOND PEARL, PH. D.
HERMAN HERBERT HANSON, M. S.
FRANK MACY SURFACE, PH. D.
— *Members of the Station Staff*

OFFICERS OF ADMINISTRATION

OF THE UNIVERSITY

ROBERT JUDSON ALEY, President
JAMES NORRIS HART, Dean
CHARLES JOHN DUNN, Treasurer
JAMES ADRIAN GANNETT, Registrar

OF THE COLLEGES AND EXPERIMENT STATION

LEON STEPHEN MERRILL, Dean of the College of Agriculture
JAMES STACY STEVENS, Dean of the College of Arts and Sciences
CHARLES DAYTON WOODS, Director of the Experiment Station
WILLIAM EMANUEL WALZ, Dean of the College of Law
HAROLD SHERBURNE BOARDMAN, Dean of the College of Technology

OF OTHER DEPARTMENTS

RALPH KNEELAND JONES, Librarian
EDGAR RAMEY WINGARD, Director of Athletics
RALPH RIGBY GLASS, In Charge of Military Instruction

*FACULTY OF INSTRUCTION AND INVESTIGATION

PROFESSORS

ROBERT JUDSON ALEY, PH. D., LL. D. — Campus
PRESIDENT

MERRITT CALDWELL FERNALD, PH. D., LL. D. — 54 Main Street
Emeritus Professor of Philosophy

JAMES MONROE BARTLETT, M. S. — College Street
Chemist of the Experiment Station

LUCIUS HERBERT MERRILL, Sc. D. — 100 Main Street
Professor of Biological and Agricultural Chemistry

JAMES NORRIS HART, C. E., M. S., Sc. D. — College Street
Professor of Mathematics and Astronomy
DEAN OF THE UNIVERSITY

FREMONT LINCOLN RUSSELL, B. S., V. S. — 80 Main Street
Professor of Bacteriology and Veterinary Science

JAMES STACY STEVENS, M. S., LL. D. — 99 Main Street
Professor of Physics
DEAN OF THE COLLEGE OF ARTS AND SCIENCES

CHARLES DAYTON WOODS, Sc. D. — 55 Main Street
DIRECTOR OF THE EXPERIMENT STATION

JOHN HOMER HUDDILSTON, PH. D. — 105 Main Street
Professor of Greek and Classical Archaeology

WILLIAM EMANUEL WALZ, M. A., LL. B., LITT. D.
Professor of Law — 8 Fifth Street, Bangor
DEAN OF THE COLLEGE OF LAW

† WILBUR FISK JACKMAN, B. S., PH. C.
Professor of Pharmacy

RALPH KNEELAND JONES, B. S. — 26 Bennoch Street
Librarian

JACOB BERNARD SEGALL, PH. D. — The Colonial, Bangor
Professor of Romance Languages

---

* Arranged in groups in order of seniority of appointment
† Absent on leave from September 1, 1913, to September 1, 1914

HAROLD SHERBURNE BOARDMAN, C. E. — 40 Main Street
Professor of Civil Engineering
DEAN OF THE COLLEGE OF TECHNOLOGY

GEORGE DAVIS CHASE, PH. D. — 59 Main Street
Professor of Latin

CAROLINE COLVIN, PH. D. — University Inn
Professor of History

ARTHUR CRAWFORD JEWETT, S. B. — 104 Main Street
Professor of Mechanical Engineering

WARNER JACKSON MORSE, PH. D. — 33 North Main Street
Plant Pathologist in the Experiment Station

CHARLES PARTRIDGE WESTON, C. E., M. A. — College Street
Professor of Mechanics and Drawing

RAYMOND PEARL, PH. D. — College Street
Biologist in the Experiment Station

CHARLES BARTO BROWN, C. E. — 97 Main Street
Professor of Railroad Engineering

WALLACE CRAIG, PH. D. — College Street
Professor of Philosophy

ROLAND PALMER GRAY, M. A. — College Street
Professor of English

RALPH HARPER McKEE, PH. D. — College Street
Professor of Chemistry

GARRETT WILLIAM THOMPSON, PH. D. — 53 Main Street
Professor of German

GUY ANDREW THOMPSON, PH. D. — College Street
Professor of English Literature

WINDSOR PRATT DAGGETT, PH. B. — College Street
Professor of Public Speaking

MINTIN ASBURY CHRYSLER, PH. D. — College Street
Professor of Biology

JOHN MANVERS BRISCOE, M. F. — The Colonial, Bangor
Professor of Forestry

LEON STEPHEN MERRILL, M. D. — Campus
Director of Agricultural Extension Service
DEAN OF THE COLLEGE OF AGRICULTURE

EDGAR RAMEY WINGARD, M. S. — University Inn
Professor of Physical Culture
DIRECTOR OF ATHLETICS

ARTHUR JULIUS JONES, PH. D. 78 North Main Street
Professor of Education

GEORGE EDWARD SIMMONS, M. S. 2 Forest Avenue
Professor of Agronomy

GEORGE WARE STEPHENS, PH. D. 76 North Main Street
Professor of Economics and Sociology

WILLIAM EDWARD BARROWS, E. E. College Street
Professor of Electrical Engineering

EDGAR MYRICK SIMPSON, A. B. 31 Higland Avenue, Bangor
Professor of Law

RALPH RIGBY GLASS, First Lieutenant, 21st United States Infantry 25 Fifth Street, Bangor
Professor of Military Science and Tactics

EDITH MARION PATCH, PH. D. University Inn
Entomologist in the Experiment Station

FRANK MACY SURFACE, PH. D. 3 Main Street
Biologist in the Experiment Station

BLISS S BROWN, M. S. 26 Bennoch Street
Professor of Horticulture

LAMERT SEYMOUR CORBETT, M. S. Campus
Professor of Animal Industry

WILLIAM AMBROSE JARRETT, PHAR. D. 16 Bennoch Street
Acting Professor of Pharmacy

JOHN ROTHWELL SLATER, PH. D. Rochester, New York
Professor of English (Summer Term)

JOHN HEDMAN, PH. D. Waterville, Maine
Professor of French (Summer Term)

HERMAN HERBERT HANSON, M. S. Forest Avenue
Associate Chemist in the Experiment Station

CHARLES WILSON EASLEY, PH. D. 7 Main Street
Associate Professor of Chemistry

EDSON FORBES HITCHINGS, C. E., M. S. 2 Summer Street
Associate Professor of Horticulture

ANDREW PAUL RAGGIO, PH. D. University Inn
Associate Professor of Romance Languages

LEON ELMER WOODMAN, PH. D. 28 Bennoch Street
Associate Professor of Physics
PAUL LEONARD BEAN, C. E. Forest Avenue
Associate Professor of Civil Engineering
ALBERT THEODORE CHILDS, E. E. 55 Main Street
Associate Professor of Electrical Engineering
GEORGE HENRY WORSTER, LL. M. 234 Center Street, Bangor
Associate Professor of Law
HARLEY RICHARD WILLARD, PH. D. 32 Main Street
Associate Professor of Mathematics
ARCHER LEWIS GROVER, B. S. 3 Myrtle Street
Associate Professor of Drawing
ALICE MIDDLETON BORING, PH. D. 98 Main Street
Associate Professor of Zoölogy
TRUMAN LEIGH HAMLIN, M. A. Stillwater
Assistant Professor of Mathematics
BARTLETT BROOKS, A. B., LL. B. 10 Columbia Building, Bangor
Assistant Professor of Law
HARRY NEWTON CONSER, M. S., M. A. Oak Street
Assistant Professor of Botany
LLOYD MEEKS BURGHART, M. A. College Street
Assistant Professor of Chemistry
RALPH WOODBURY REDMAN, B. S. 6 Myrtle Street
Assistant Director of Agricultural Extension Service
JULIUS ERNEST KAULFUSS, B. S. Main Street
Assistant Professor of Civil Engineering
ROBERT RUTHERFORD DRUMMOND, PH. D.
80 North Main Street
Assistant Professor of German
CORNELIA PALMER 98 Main Street
Assistant Professor of Home Economics
CARL HENRY LEKBERG, B. S. 82 North Main Street
Assistant Professor of Mechanical Engineering
LAWRENCE BOYLSTON CHAPMAN, B. Sc. 102 Main Street
Assistant Professor of Mechanical Engineering
JAMES McCLUER MATTHEWS, A. M. 35 North Main Street
Assistant Professor of Economics and Sociology
HAROLD SCOTT OSLER, B. S. 106 Hannibal Hamlin Hall
Assistant Professor of Agronomy

INSTRUCTORS

EVERETT WILLARD DAVEE — College Street
Instructor in Wood and Iron Work

CHARLES JENKINS CARTER — Forest Avenue
Instructor in Machine Tool Work

*LOWELL JACOB REED, M. S.
Instructor in Mathematics

MAYNIE ROSE CURTIS, PH. D. — 98 Main Street
Assistant Biologist in the Experiment Station

ALBERT GUY DURGIN, M. S. — Middle Street
Instructor in Chemistry

WALTER ELWOOD FARNHAM — Forest Avenue
Instructor in Drawing

WALTER EDMUND WILBUR, M. S. — 5 Pine Street
Instructor in Mathematics

ERNEST CONANT CHESWELL — 25 Mill Street
Instructor in Electrical Engineering

ROYDEN LINDSAY HAMMOND — 59 Main Street
Seed Analyst and Photographer in the Experiment Station

EARLE OVANDO WHITTIER, B. S. — College Street
Instructor in Chemistry

HOWARD MADISON PARSHLEY, A. M. — 7 Main Street
Instructor in Zoölogy

VICTOR GEORGE AUBRY, B. S. — 208 Hannibal Hamlin Hall
Instructor in Animal Industry

HARRY WOODBURY SMITH, B. S. — 1 Forest Avenue
Instructor in Bacteriology

CLARENCE WALLACE BARBER, B. S. — 24 Main Street
Assistant Biologist in the Experiment Station

EDWARD EUGENE SAWYER, B. S. — Old Town
Assistant Chemist in the Experiment Station

ELMER ROBERT TOBIE, B. S. — 5 Pond Street
Assistant Chemist in the Experiment Station

ALPHEUS CROSBY LYON, C. E. — 1 Pond Street
Instructor in Civil Engineering

HENRY ROBBINS BARROWS, B. A. — 106 Hannibal Hamlin Hall
Instructor in Biology

---

*Absent on leave from September 1, 1913, to September 1, 1914

JOHN HARRY PARRY, B. A. 53 Main Street
Instructor in English

LEROY FRANKLIN BLISS, B. A. College Street
Instructor in English

MICHAEL SHAPOVALOV, M. S. 82 North Main Street
Assistant Pathologist in the Experiment Station

CHARLES BROWN CLEAVES, B. S. 82 North Main Street
Instructor in Drawing

RAYMOND HARMON ASHLEY, PH. D. 20 Mill Street
Instructor in Chemistry

HERBERT SOLEY BAIN, B. A. 53 Main Street
Instructor in German

DOROTHEA BEACH University Inn
Instructor in Home Economics

ERIC NICHOLS BOLAND, M. S. 208 Hannibal Hamlin Hall
Instructor in Animal Industry

DAVID LEE CLARK, A. M. 16 Bennoch Street
Instructor in English

CARLETON WHIDDEN EATON, A. B., M. F. 14 Bennoch Street
Instructor in Forestry

RALPH MAYNARD HOLMES, A. M. 112 Main Street
Instructor in Physics

ORVILLE ALVIN JAMISON, B. Sc. in Agr. 59 Main Street
Instructor in Animal Industry

EARL JONES, M. S. (Agr.) 106 Hannibal Hamlin Hall
Instructor in Agronomy

WALTER HINES NASON, B. S. College Street
Instructor in Civil Engineering

MARTIN ANDREW NORDGAARD, A. B. 205 Hannibal Hamlin Hall
Instructor in Mathematics

ROBERT AUSTIN PINKHAM, B. S. College Street
Instructor in Electrical Engineering

FRANK PRENTICE RAND, B. A. 16 Bennoch Street
Instructor in English

LILIAN NANCY RANDALL University Inn
Instructor in Home Economics

CHARLES EDWARD ROCHE, M. A. 80 Main Street
Instructor in Romance Languages

JOSEPH SPEAR, B. A. College Street
Instructor in Mathematics and German

JAMES NEWELL STEPHENSON, M. S. — 10 Oak Street
Instructor in Chemistry

VINCENT MILO TRANSUE, M. S. — 78 Main Street
Instructor in Physics

ROBERT CALVIN WHITFORD, A. M. — 16 Bennoch Street
Instructor in English

ELWOOD WHITNEY JENNISON, B. S. — 233 Cedar Street, Bangor
Instructor in Mechanical Engineering

JOHN RICE MINER, B. A. — 38 Pine Street
Computer in the Experiment Station

GEORGE ALBERT YEATON — Norway
Director of Farm Demonstrations, Oxford County

FRANK HAROLD BICKFORD — 5 Pond Street
State Leader of Boys and Girls Agricultural Club

CLARENCE ALBERT DAY — Machias
Director of Farm Demonstrations, Washington County

ARTHUR LOWELL DEERING, B. S. — Augusta
Director of Farm Demonstrations, Kennebec County

MAURICE DANIEL JONES, B. S., — Forest Avenue
Director of Farm Demonstrations, Penobscot County

ERNEST MONZER STRAIGHT, B. S. A. — South Portland
Director of Farm Demonstrations, Cumberland County

MAY ELLA TAFT, A. B., B. S. — 14 Bennoch Street
Cataloger in the Library

GENEVA ALICE REED, B. A. — College Street
Assistant in the Library

ANNE ELIZABETH HARWOOD, B. S. — 14 Bennoch Street
Assistant in the Library

ANTOINETTE TREAT WEBB, A. B. — Myrtle Street
Assistant in English

LECTURERS

LUCILIUS ALONZO EMERY, M. A., LL. D. — Ellsworth
Lecturer on Roman and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D. — Boston
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D. — 107 Court Street, Bangor
Lecturer on Admiralty

ISAAC WATSON DYER, B. A. Portland
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

JOHN ROGERS MASON, A. M., LL. B. 384 Hammond Street, Bangor
Lecturer in Bankruptcy Law

CHARLES JOHN DUNN 22 Bennoch Street
Lecturer on Maine Practice

HENRY BURT MONTAGUE, LL. M. Southbridge, Mass.
Lecturer on Practice and History of Law

LAWRENCE VIVIAN JONES, LL. B. 267 Pine Street, Bangor
Lecturer on Forestry Law

STANDING COMMITTEES OF THE FACULTY

ADMISSION: Hart, Boardman, L. S. Merrill, Stevens, Walz

ADVANCED DEGREES: Chase, Colvin, McKee, Pearl, Segall, Walz, Willard, Woodman

ATHLETICS: Wingard, Grover, A. J. Jones, Kaulfuss, Worster

ATTENDANCE: C. B. Brown, Craig, Hitchings, Simpson, Stephens, Wilbur

AUDITING: L. H. Merrill, Brooks, Burghart, Parshley, G. A. Thompson

CHAPEL: Barrows, L. S. Merrill, G. A. Thompson, G. W. Thompson, Woodman

COMMENCEMENT: Woods, Childs, Hitchings, R. K. Jones, L. H. Merrill

EMPLOYMENT: Gannett, Corbett, Simmons

FITTING SCHOOLS: A. J. Jones, Chase, Easley, Gray, Hart, L. S. Merrill, Weston

HEALTH: Boardman, Boring, Morse, Russell, Wingard

Honors: Chrysler, Bean, Briscoe, B. S. Brown, Easley, Lekberg, Willard

Library: R. K. Jones, Barrows, A. J. Jones, Redman, Willard

Non-Athletic Organizations: McKee, Bean, Chrysler, G. W. Thompson

Publications: Stevens, R. K. Jones

Public Exhibitions: Gray, Daggett, Drummond, Raggio

Rules: Jewett, C. B. Brown, Conser, Drummond, Simmons, Stephens

Schedule: Weston, Gannett, Hamlin, the Deans

Social Affairs: Huddilston, Briscoe, Colvin, Farnham, Palmer, Wingard

Student Affairs: Hart, Boardman, Glass, L. S. Merrill, Stevens, Walz, Wingard

GENERAL INFORMATION

HISTORY

The University of Maine is a part of the public educational system of the State. Its establishment followed the passage of an act of Congress, approved by President Lincoln, July 2, 1862, which provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings, and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out its purposes.

The State of Maine accepted the land grant and gave full assent to all the provisions and conditions of the act in a resolve of the Legislature of 1863, approved March 25. The Legislature of 1865, in an act approved February 25, created a corporation to act for the State in the administration of the affairs of the College, and defined its powers and duties. The original name of the institution was the State College of Agriculture and the Mechanic Arts; this was changed to the University of Maine by the Legislature of 1897, and Commencement Day, June 23d of that year, was the date when the change went into effect.

The first Board of Trustees was composed of sixteen members, one from each county, each county delegation in the Legislature selecting one member of the Board. The principle of the county representation was abandoned in 1867, when the size of the Board was reduced. It now consists of eight members, seven of whom are appointed by the Governor with the advice and consent of the Council, and one by the Governor upon the nomination of the General Alumni Association.

The first class, consisting of twelve members, was admitted September 21, 1868. The Faculty numbered two. By 1871-72, when the first class had become seniors, four curricula had been arranged,—Agriculture, Civil Engineering, Mechanical Engineering, and Elective.

The legislative act which created the Board of Trustees directed that they should, "as soon as may be, arrange and make known the several courses of instruction which they will undertake at the outset of the College, and shall enlarge and improve the same whenever practicable." The development of the University has been in compliance with these directions. The College of Agriculture is the result of the enlargement and improvement of the original curriculum in Agriculture, the College of Technology of the curricula in Civil and Mechanical Engineering, and the College of Arts and Sciences of the Elective curriculum.

The original single curriculum of the College of Agriculture continued with but minor changes for many years. Curricula in Horticulture and Forestry were added in 1902. The School Course in Agriculture was established in 1903. The curriculum in Agriculture was divided into Agronomy and Animal Industry in 1904, and the latter was subdivided into Animal Husbandry and Poultry Husbandry in 1909. The Extension Department was organized in 1907. Although work in Home Economics was begun some years earlier, the Home Economics curriculum was not given in full until 1909.

The College of Arts and Sciences has developed gradually, as the needs of the other colleges of the University and the demands of its own students have required and as means have permitted, from the original Elective curriculum into an organization which not only provides required and elective courses for students in the other colleges of the University but has also a well developed entity of its town. It offers men and women opportunities at the University of Maine equal to those of New England colleges of the usual type. It has now thirteen departments in which students may select their major subject,—Biology, Chemistry, Economics and Sociology, Education, English, German,

Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics, and Romance Languages.

The College of Technology has added to its two original curricula, Civil and Mechanical Engineering, Chemistry in 1874, Electrical Engineering in 1894, Pharmacy in 1895, and Chemical Engineering in 1905. This college was the first to gain popularity and much of the success of the University as a whole is due to the immediate success of the engineering graduates of the early classes.

The College of Law was opened in 1898. It occupied quarters in the Exchange Buildings, at the corner of State and Exchange Streets, Bangor, until the Bangor fire of 1911. It is now located in a building of its own at the corner of Union and Second Streets, Bangor.

The Maine Agricultural Experiment Station was established as a department by act of the Legislature of 1887, succeeding the Maine Fertilizer Control and Agricultural Experiment Station which had been established in 1885. The latter, although an organically independent institution, had been given accommodations by the College, and its property was transferred to the new station when that came into existence as a result of the passage of the Hatch act by Congress, in 1887, and the acceptance of its terms by the Maine Legislature of the same year. In 1906, Congress passed the Adams act for the further endowment of the station established under the Hatch act.

Graduate instruction has been given by various departments for many years. The first Master's degree was conferred in 1882. There is no provision for graduate work in advance of that required for the Master's degrees.

Summer schools were held in coöperation with the State Department of Education in 1895, 1896, and 1897. These were of three weeks each and they attracted chiefly teachers in elementary schools. Beginning with 1902, a Summer Term has been held annually, first of five weeks but now of six. It is designed for teachers in secondary schools and for college students who desire to take advantage of its opportunities, and it also gives some courses for those who seek an opportunity to make up entrance credits. In 1913, the departments offering courses were Chemistry, Economics and Sociology, Education, English, German, History, Home Economics, Latin, Mathematics and Astronomy, Physics, and Romance Languages. Provision was made also for instruction in manual training, and a three-weeks course in rural economics was given.

The University is coeducational, women having been admitted since 1872, in compliance with special legislative enactment.

ENDOWMENT AND INCOME

The State of Maine received by the act of Congress above referred to 210,000 acres of public land from which an endowment fund of $118,300 was realized. Former Governor Abner Coburn, of Skowhegan, for many years President of the Board of Trustees, made a bequest of $100,000 to the institution. These two funds yield respectively 5% and 4% annually.

Under acts of Congress, approved August 30, 1890, and March 4, 1907, the University receives $50,000 annually from the United States.

Under an act of the Legislature, approved April 2, 1913, the University receives $110,000 for each of the years, 1913, 1914, 1915, and 1916, for maintenance.

Under an act of the Legislature approved April 2, 1913, the University receives $95,000 for buildings for the years 1913 and 1914.

Under acts of Congress approved March 2, 1887 and March 17, 1906, the University receives $30,000 annually for the maintenance of the Agricultural Experiment Station. Students fees and miscellaneous receipts complete the income.

LOCATION

The university campus has a beautiful location in the town of Orono, Penobscot county, three miles from the city of Old Town and nine miles from the city of Bangor. The Stillwater River, a branch of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The cars of the Bangor Railway and Electric Company run through the university grounds. Visitors may find it convenient to take the electric cars at Bangor, or Old Town, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located at the corner of Union and Second Streets, Bangor.

BUILDINGS AND THEIR EQUIPMENT

Alumni Hall.—This is a brick building, erected in 1900. It was given its name because funds required for its erection were subscribed by alumni of the University. The front part contains on the ground floor

the offices of the President, the Dean of the University, the Registrar, and the Treasurer; the Trustees' room, the university post office, and two recitation rooms for the use of the department of Mathematics. The second floor contains the university chapel with a large pipe organ in the choir gallery, and the gymnasium and drill hall. The dimensions of the gymnasium are 100 by 72 feet. It is equipped with complete apparatus of the most approved kind, and is encircled by a nine-foot running track suspended from the roof. Under the gymnasium are offices of the Professors of Physical Culture and Athletics and Military Science and Tactics, the baseball cage, lockers, lavatories, and store rooms.

Aubert Hall.—The Legislature of 1913 appropriated $75,000 for the erection of a Physical-Chemical Building. It is expected that this building will be ready for occupancy at the beginning of the fall semester, 1914. It has been named Aubert Hall in honor of Alfred Bellamy Aubert, Professor of Chemistry from 1874 to 1910.

Coburn Hall.—This building was erected in 1888 for the departments of Natural History and Agriculture. It was named for ex-Governor Abner Coburn of Skowhegan, Governor of Maine, 1863-64, President of the Board of Trustees, 1867-79, and chief individual benefactor of the University. It is now occupied chiefly by the department of Biology and the museum. It is a brick building three stories in height. In the basement are a laboratory for animal and plant physiology, a taxidermist's laboratory, and the University Store; connected with it is a small greenhouse for the use of the department of Biology. On the first floor are a research zoölogical laboratory, three class rooms, and part of the museum. On the second floor are the botanical and zoölogical laboratories and offices, a lecture room, and part of the museum. On the third floor are two large rooms, one containing the remainder of the museum, the other forming a spacious lecture room.

Estabrooke Hall.—This building is named for Professor Horace M. Estabrooke, head of the department of English from 1891 until his death in 1908. It is a wooden building, formerly the Commons, remodeled in 1911 for the use of the department of English. It contains four reciation rooms for large sections, two smaller rooms for consultation purposes, and four offices for members of the department.

Fernald Hall.—This is the oldest building on the campus, erected 1868-70 for the department of Chemistry. It was named for Merritt C. Fernald, LL. D., the first member of the faculty appointed, who retired in 1908. He was Acting President, 1868-71, and President, 1879-93. It is a two-story brick building, containing seventeen rooms.

The balance rooms, a small lecture room, three offices, and the laboratory for advanced students are on the ground floor. Upon the second floor are a large lecture room, the laboratory for freshman work, a recitation room, an office, and the supply room. Under the roof are arranged the mineralogical laboratory, dark rooms, and a laboratory for qualitative analysis. An assay laboratory, a laboratory for water and gas analysis, a room for work in physical chemistry, and store rooms are in the basement.

Holmes Hall.—This is a two-story brick building with high well lighted basement, erected for the Maine Agricultural Experiment Station. The central portion was built in 1888. A part of the south wing was added in 1890, the north wing was added in 1904, the south wing was completed and the vestibule entrance added in 1913. It is named for Dr. Ezekiel Holmes, of Winthrop, pioneer in scientific agricultural investigations, founder and first secretary of the State Board of Agriculture, founder of the Maine Farmer and its editor until his death in 1865, and most active in securing the establishment of the State College of Agriculture and Mechanic Arts as an independent institution.

On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, fertilizers, and drugs; the laboratories of the entomologist; the laboratory and office of the plant pathologist. The general office and mailing room, the Director's office, laboratories for seed testing and photography and the laboratories of the biologist are on the second floor. There are in a high well lighted basement, rooms for the gas machine, for the grinding and preparation of samples, laboratory for the calorimeter, culture and preparation rooms for the plant pathologists, a nitrogen laboratory, and rooms for the storage of chemicals and glassware. The large attic is used for the storage of samples and supplies.

The building is connected with the steam heating plant, supplied with gas and electricity and is thoroughly equipped with apparatus for the work of agricultural investigation. An attached greenhouse is used by the entomologists and plant pathologists.

Lord Hall.—This is a brick building, completed in 1905, erected for the departments of Electrical and Mechanical Engineering. It is named for the Honorable Henry Lord of Bangor, member of the Board of Trustees, 1891-1908, and its President, 1892-1908. It consists of a main part, 82x56 feet in area and two stories in height, and an ell, 125x42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, the shops, suitable laboratories,

and offices for the professors and instructors. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc. For tests of materials there are two Richlé power-operated testing machines, one of 60,000 lbs. capacity for tensile, compressive, and transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necessary for the study of engine performance. The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. These are all well equipped. The forges are of the Sturtevant down draft type. New benches and new lathes have been installed in the pattern shop, and also new lathes of the highest type in the machine shop. The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible, and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volts, alternating current system to direct current by means of rotary converters and belted alternating current motors driving direct current generators. In addition to voltmeters, ammeters, and watt-meters for both direct and alternating currents, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self-starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Wingate Hall.—This is a brick building, erected in 1891-92 for the engineering departments. It stands on the site of White Hall, the first building erected for college uses, burned in 1890. It is named for Honorable William P. Wingate of Bangor, who first suggested and was most active in securing the location of the institution in Orono. He was a member of the Board of Trustees, 1867-84, and its President, 1879-83. It is now occupied by the departments of Civil Engineering, Latin, Mechanics and Drawing, and Physics. On the ground floor are three recitation rooms, instrument rooms, an optical room, and the offices of the Professors of Civil Engineering and Mechanics and Drawing, and the Dean of the College of Technology. On the second floor are the offices and recitation room of the Professors of Physics and

Latin, two physical laboratories, and the physical apparatus rooms. On the third floor are two large, well lighted drawing rooms for the use of the departments of Civil Engineering and Mechanics and Drawing, and a filing room containing a collection of blue prints belonging to the department of Civil Engineering. In the basement are the electrical laboratory and the photometer room of the department of Physics, and the cement testing laboratory. On the fourth floor is another photometer room for the use of students in Physics. Meteorological records for the United States Government are kept in this building.

Winslow Hall.—This building was erected in 1908 for the various departments of the College of Agriculture. It is named in honor of the Honorable Edward B. Winslow of Portland, member of the Board of Trustees, 1898-1911, and its President, 1908-11. It is the largest building on the campus. The ground plan measures 63-100 feet and the building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors including a well lighted basement for lecture rooms and laboratories. On the first floor are the offices of the Dean of the College of Agriculture, the faculty room and library, the offices and class rooms of the Professors of Agricultural Chemistry, Animal Industry, Bacteriology and Veterinary Science, and the office and filing room of the Extension department. On the second floor are the offices of the department of Agronomy, Farm Management, Forestry, and Home Economics; the agronomy and forestry lecture rooms; farm crops laboratory with seed and plant storage rooms; bacteriological laboratory; and the laboratory and dining room of the department of Home Economics. The remainder of the work in home economics is given in a building adjoining Winslow Hall. Across the front of the building on the third floor are the office, class room, refrigerator, and laboratories of the department of Horticulture. The remaining half of this floor is occupied by a large lecture room, a drawing room, and a room used for domestic art; the two latter are separated from the larger room by folding doors, so that the three rooms can be thrown into a large auditorium. The basement is built high above the grade line so that light and ventilation are good. It contains a lecture room, the agricultural and biological chemistry laboratory, the soil physics laboratory, a laundry for the department of Home Economics, and a dark room for photography. The interior finish and furniture are in dark stain, and the building is equipped with electric lights, elevator, hot and cold water, gas, and high pressure steam for laboratory work.

Library Building.—The Library Building is of stone, two stories above a basement which is almost entirely above the ground level, and is surmounted by a dome. It was completed in 1906. For its erection and furnishing, Mr. Andrew Carnegie gave $55,000, and the Hallowell Granite Works furnished the granite at a price that was equivalent to a gift of several thousand dollars.

The first floor contains an entrance hall, open to the dome, reference and periodical rooms, the Librarian's office, a room for reserved books, and a women's room. The second floor contains a general lecture room with seating capacity of 150, and five seminar rooms. On the walls of the gallery, the lecture room, and the delivery room is the art collection of the University. The basement contains a newspaper room, store room, janitor's room, men's room, and a club room designed primarily as a meeting place for various student organizations.

The stacks are in the rear of the main building, and are freely accessible. They contain shelf room for 60,000 volumes, and a cataloger's room.

The Library Building is well lighted and heated and is thoroughly ventilated. It is connected by telephone with all other important university buildings.

Stewart Hall.—The Building is situated in Bangor, corner of Union and Second Streets. It is in one of the finest parts of the city, on the car line, in a very quiet neighborhood, and within a few minutes' walk from the Court House, the Y. M. C. A., the business section of the city, and the M. C. R. R. station. The grounds about the building occupy nearly a whole square. They are surrounded by elms and afford ample space for tennis courts. The building itself is a brick structure, three stories high. There are twelve large, commodious, and well lighted rooms in the main part. Those on the first floor are used as recitation rooms. There are four large rooms on the second floor devoted to library and office purposes, and four rooms on the top floor, devoted to the needs of the practice court, the Maine Law Review, and to recreation purposes. The building is lighted and heated throughout by gas and steam heat.

Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a combined transit instrument and zenith telescope of three-inch aperture constructed by Bomberg, and a Respold vertical

circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

Dairy Building.—The dairy building, 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese-curing room, and a testing laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is supplied with hot and cold water. Power is furnished by a six horse-power engine.

Farm Buildings.—The lower barn, 100 x 50 feet, contains a cow stable with 26 stalls, two grain rooms, three bull rooms, and silo; and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, and an electric motor for power. The barns are lighted by electricity and supplied with water and steam. The basements of the barn contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, is of special design and contains six large pens, a nursery, and a storage room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery. The upper floor of one is used as a laboratory for classes in farm machinery. A modern piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed-cooking rooms A ten-room farm cottage, occupied by the men employed in the different departments comprising the College of Agriculture, has also been erected. The farm of the University of Maine is composed of two parcels of land aggregating 473 acres, of which 120 acres are under cultivation. The cultivated land is handled according to a definite system of rotation of crops, including hoed crops, nurse crops, and hay crops. Such grains as oats, barley, rye, and wheat are grown extensively, and potatoes and corn form a large part of the crops of the farm. The hay acreage cuts considerably more than 100 tons annually. The fertility of the land is maintained by applications of lime, barnyard dressing, commercial fertilizers, and by the turning under of green crops once in four years. It is the aim of the management to make the farm support the live stock maintained upon it. The areas of permanent pasture land form a considerable part of the farm and the remainder of it is given up to forest and orchard areas. Highmoor Farm, purchased by the State Legislature for the use of the Experiment Station, is described under that division of the University.

Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. The building is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

Poultry Plant.—The poultry plant of the College of Agriculture consists of a two and a half story building, 25 x 40 feet, the lower portion of which is designed for an incubator room and is built of brick with non-conducting walls. On the upper floors is located a poultry apparatus laboratory. Attached to this building is a brooder house, 15 x 40 feet, for winter brooding. It is equipped with a hot water heater. The fattening and killing house is 14 x 45 feet, with an interior arrangement to demonstrate crate fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room, and is equipped with water heater and cooling tanks. The several breeds of poultry kept by the College of Agriculture are housed in colony houses of various styles and sizes, and one long laying-house, 14 x 96 feet, divided into twelve pens especially adapted for instructional purposes. The poultry plant belonging to the Experiment Station contains an incubator house 31 x 31 feet, with tenement above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two-story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2500 chicks.

Stock Judging Pavilion.—Located about fifty feet to the rear of Winslow Hall is an octagonal structure fifty feet in diameter, built of similar materials and used for scoring and judging stock. In the center of the structure is a ring twenty-five feet in diameter, and surrounding this are six rows of seats arranged in amphitheatre style. The building has a seating capacity of about six hundred and can be used for meetings too large for any of the rooms in Winslow Hall.

Balentine Hall.—The Legislature of 1913 appropriated $20,000 for the erection of one wing of a women's dormitory. It is expected that this wing will be completed by September 1, 1914. This building has been named Balentine Hall in honor of Elizabeth Abbott Balentine, Secretary and Registrar of the University, from 1895 to 1913.

Hannibal Hamlin Hall.—This is a men's dormitory, completed in 1911, named for the Honorable Hannibal Hamlin, of Hampden and Bangor. Mr. Hamlin held many offices of honor and responsibility,

including that of Vice President of the United States, 1861-65. Mr. Hamlin represented Penobscot County in the original Board of Trustees, and was its first President, serving 1865-66. This building is of brick with stone trimmings. It is 35 feet wide and 168 feet long. It has four stories founded on a high, well lighted concrete basement, in which are located a dining room 32 by 90 feet, recreation room 26 by 32 feet, waiters' room 12 by 18 feet, with lavoratory, toilet, and locker room, and room for training table 12 by 26 feet. In a one-story ell adjoining the basement is the kitchen, 32 by 34 feet, with pantry, ice room, coal room, toilet room, and closet. From the basement up, the building is separated into three sections by two 12-foot brick fire walls, which extend up through the roof. Each section has its own entrance, vestibule hall, and corridor. The first story of the central section has a reception hall and living room, with bath, lavatory, and shower bath on one side of the corridor, and on the other side the Young Men's Christian Association rooms with toilet and lavoratory. The central section in the second, third, and fourth stories is divided in each story into four chambers, with shower bath and lavoratories. The two end sections in each of the four stories are divided into four suites of two bedrooms and a study room, with a toilet, lavoratories, and shower bath for the use of the four suites. The interior is of ash. The building is heated by steam and lighted by electricity. There are 96 rooms in the two end sections and 17 in the central section, making a total of 113 rooms above the basement. Each bedroom has an ample clothes closet.

Oak Hall.—This is a men's dormitory, erected in 1871. It is named for Honorable Lyndon Oak, of Garland, member of the Board of Trustees, 1867-89, its Clerk, 1871-83, and President, 1883-89. It is a substantial brick building of four stories and has forty-nine rooms for students. It contains bath rooms, is heated by steam and lighted by electricity, and is connected with Hanibal Hamlin Hall by a covered passage way. This building was thoroughly renovated in the summer of 1913.

Mount Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings upon a site overlooking the campus, and commands a beautiful view of the river, villages, and hills. It is two stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor,

dining-room, kitchen, bath-room, and ten study rooms intended for two students each. The rooms are large, well lighted, heated by steam, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. The Mount Vernon House is under the supervision of a superintendent.

The Infirmary.—A wooden building has been erected in the rear of Hannibal Hamlin Hall to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for women, as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Central Heating Plant.—The central heating station is located across the car tracks from the university buildings, just above the Sigma Alpha Epsilon house, and on low ground so that practically all the buildings to be connected with drain by gravity to the plant, thus saving the pumping or lifting of the returns. The station is a plain red brick structure, without any attempt at ornamentation, but of good proportions, and large enough to provide room for present needs and allow for considerable future installation of engines and generators to furnish light and power for the University when practicable. This plant supplies heat to nearly all the university buildings.

Power House.—This wooden building, 30 x 56 feet, north of Alumni Hall, formerly the power and heating plant of the University, is now used exclusively for laboratory purposes in connection with the department of Mechanical Engineering. It contains two boilers, a one hundred and fifty horse-power Babcock and Wilcox and an eighty-five horse-power Heine boiler, a fifty horse-power Corliss engine, a fifteen horse-power Otto gasolene engine, a plain slide valve engine, and two dynamos with operating switchboard.

Fraternity Houses.—The local chapters of Beta Theta Pi, Delta Tau Delta, Kappa Sigma, Phi Gamma Delta, Phi Kappa Sigma, Sigma Alpha Epsilon, Theta Chi, and the local chapter of Phi Eta Kappa have built houses on the campus; the local fraternity of Sigma Nu leases a house on the campus from the University; the local chapter of Lambda Chi Alpha owns a house adjoining the campus on College Street, and the local chapters of Alpha Tau Omega and Sigma Chi own houses on North Main Street.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are

the President's house, and five residences occupied by members of the faculty.

Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus, about 1,200 feet from the gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and track and field athletics.

THE LIBRARIES

The university libraries contain over fifty thousand volumes, of which over three thousand seven hundred are in the law library at Bangor. Such volumes as are required for departmental use are deposited temporarily in other buildings, where they may be consulted.

More than half of the volumes in the libraries have been added within ten years, and the greater part have been acquired by purchase. Most of the books bought are selected by heads of departments. The collection is of far greater working value than many libraries containing a much greater number of volumes.

The valuable horticultural library of the late Professor Welton M. Munson was bequeathed by him to the University.

The law library is particularly well selected, and has been acquired since the old library was destroyed in the Bangor fire of 1910.

The general library is open daily during term time from 8.00 A. M. to 5.30 P. M., and from 7.00 to 9.30 P. M., except Sundays and holidays. It is open Sunday afternoons from 2.30 to 5.30, and on holidays from 8.00 A. M. to 12.00 M. Students may borrow three volumes at a time, to be retained three weeks; if a larger number are desired, application should be made to the Librarian. Officers of the University may borrow any reasonable number of volumes, without time limit except that any book may be recalled at any time, and all books must be returned prior to Commencement. Other responsible persons may obtain the privileges of the library upon application to the Librarian.

The libraries are classified by the Dewey decimal system, modified for certain classes. There is a card catalog, author and subject, near the delivery desk.

It is the desire of the university authorities to make the library as useful as possible to all citizens of the State so far as this may be done without interference with its primary purposes.

MUSEUM OF NATURAL HISTORY

MINTIN ASBURY CHRYSLER
Curator of the Botanical and Zoölogical Collections

LUCIUS HERBERT MERRILL
Curator of the Geological Collections

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building.

Geological Collections.—These collections, occupying the uppper floor of the wing of Coburn Hall, are accessible daily during the college year except on Saturdays and Sundays. They include the more important fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the State; a general collection of more common minerals; a collection of economic minerals furnished by the United States National Museum, an educational series of rocks furnished by the United States Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the State may be made of great value, both from the scientific and economic standpoint. Students and others residing in the State are urged to contribute specimens from their home localities. Valuable accessions have been received from the United States National Museum.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formaline material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the State; a small set of exotic mammals; a more complete working collection of native birds, birds' nests, and eggs; an illustrative collection of the other groups of vertebrates; a rather large collection of the shells of native and exotic molluses; and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall. The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents more especially the flora of Maine and other New England states, but

includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticæ, Cummings and Seymour's North American Lichens, and a collection of economic seeds prepared by the United States Department of Agriculture.

Collections other than the herbarium include exhibits illustrating the manufacture of paper and of cocoa, the wood and bark features of the timber trees of Maine, conifers mounted in jars, plants used in pharmacy, commercial fibres, and artificial silk. The valuable collection of fossil plants presented by the late Professor Harvey occupies two cases.

THE ART COLLECTION

The collection consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library Building, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

With the organization of the classical departments in 1899 a beginning was made in the establishing of an art collection which would serve to vitalize and intensify the work in the humanities.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University is fortunate in possessing many of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia*

and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library Building contains examples of the work of the chief Florentine and Umbrian masters of the 14th and 15th centuries, arranged on the walls in historical sequences. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the departments of Greek and Latin have a large collection of photographs and lantern slides. A stereopticon lantern is a part of the regular equipment in classics and art.

ORGANIZATIONS

University of Maine Society of Civil Engineering.—This society is composed of the members of the senior and junior classes who are enrolled in the curriculum in Civil Engineering. The object of the society is to investigate by reading and discussion the various engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of other institutions and by practicing engineers.

The affairs of the society are controlled by the students under the advice of the head of the department of Civil Engineering.

University of Maine Branch of the American Society of Mechanical Engineers.—A regularly organized branch of this national society holds regular meetings for the presentation and discussion of engineering papers by members and by visiting engineers.

Agricultural Club.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

University of Maine Branch of the American Institute of Electrical Engineering.—This is an organization for the promotion of the student's interest in electrical engineering work, and to keep him in touch with the latest developments in this branch of engineering activity. Membership in the branch is extended to members of the Electrical Engineering faculty, students pursuing the Electrical Engineering cur-

riculum; and to members and associate members of the American Institute.

American Chemical Society.—The Maine Section of the American Chemical Society has its headuarters at Orono. Some students in the department of Chemistry are members, and all are welcome to its meeting.

Maine Masque.—This is a dramatic club which aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all undergraduates are eligible.

Deutscher Verein.—This society, organized in 1902, is composed of teachers and students. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

Cercle Français.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

Round Table.—The Round Table is an organization composed of the women of the faculty, the wives of the professors and instructors, and other women interested in the University. Its purpose is to promote the social welfare of the students.

Arts Club.—This is a club composed of the professors and instructors in the College of Arts and Sciences with their wives. It meets monthly and discusses various subjects of general interest.

Young Men's Christian Association.—The Young Men's Christian Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious

services are held in the Library Building and classes for the study of the Bible are conducted on Sunday. This association is a branch of the national Young Men's Christian Association.

Young Women's Christian Association.—This is an organization for religious work composed of women students.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the spring semester of the junior year the five members of the class having the highest standing are elected members, and at the end of the fall semester of the senior year the five next highest in the collegiate departments, and two from the College of Law, are added.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing, or to those who have shown marked ability along the lines of agricultural study and research. Chapters exist in sixteen other universities.

Tau Beta Pi.—Tau Beta Pi is an honor fraternity for engineers and has chapters in about twenty-five of the leading universities and technical schools. Elections to the fraternity take place twice a year, and are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

Alpha Chi Sigma.—Alpha Chi Sigma is a professional fraternity with chapters in about twenty American universities. The members are elected from those whose major work is in the department of Chemistry.

Forestry Club.—All students majoring in forestry are eligible for membership in the Forestry Club. The purpose of the club is to give an opportunity for presenting informal discussions and technical papers on forestry subjects, and to promote coöperation and general good fellowship among the forestry students. The meetings are semi-monthly.

UNIVERSITY PUBLICATIONS

Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the Trustees and

President includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station.

University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public. Among recent issues are bulletins relating to the Classical Curriculum, the Curricula in Agriculture, the Curriculum in Pharmacy, the College of Law, the College of Arts and Sciences, the College of Technology, the Curriculum in Forestry, the Courses in Education, the Summer Term, and an Alumni Directory.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the State by the department of Agricultural Extension.

Annual Report of the Experiment Station, and the Experiment Station Bulletins.—These give complete results of the work of investigation of the Station.

Official Inspections.—These are published by the Experiment Station, and contain the results of the work of inspection of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs, foods, fungicides and insecticides.

The Bulletins and Official Inspections are sent free on request to any resident of Maine.

Maine Campus.—This is a journal published semi-weekly during the academic year by an association of the students.

Prism.—The Prism is an illustrated annual, published by the junior class.

Practical Husbandry.—This is a quarterly magazine published under the direction of the Agricultural Club. It is devoted to practical and technnical agriculture.

Maine Law Review.—This is a magazine published under the direction of the students of College of Law. It is devoted to a discussion of law cases and other current legal problems.

University News.—This is a paper published weekly by the University in connection with the courses in journalism, and furnishes items of interest concerning the affairs of the University. It is not intended for general circulation.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammunition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of four companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the olive-drab service uniforms prescribed for infantry officers of the United States Army, except that "Maine" insignia and buttons are used; for non-commissioned officers, the olive-drab service uniforms of the United States Army, except that "Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14.15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty.

The three seniors who attain the highest standing in the military department are reported to the military secretary of the United States Army, and their names are printed in the Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

With the exceptions noted below, all men students physically qualified are required to take military work for three hours a week during their

first and second years at the University. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years course. After the freshmen and sophomore years the work is elective. Students in the College of Law, the School Courses in Agriculture, the two years curriculum in Pharmacy, and graduate students are excused from military work.

The grades and relative rank of Officers and non-commissioned officers will be determined by the Professor in charge, subject to the approval of the President.

PHYSICAL TRAINING

Physical training is required of male freshmen three hours per week. All other students may elect this work and receive credit. Credit is given on the basis of three hours of physical training to one hour of recitation. Students registered on athletic teams are excused during the regular athletic training, but no credit will be given unless the physical training it taken for the remainder of the year. Every student who registers for an athletic team must first pass a required physical examination.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the director, the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. It is supplied with an equipment of modern apparatus for heavy and light gymnastic work. There is floor space of 6,262 square feet, and an overhead running track.

The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220-yard straightaway, and is graded and laid out for football, baseball, and track athletics. Here the men may exercise for recreation or train for active competition. There are several tennis courts on the university campus. On the Stillwater River canoeing may be enjoyed, as well as skating and ice hockey in the winter.

All students exercising at class hours wear a regulation suit which consists of white shirt, white running pants with blue stripe, and white rubber sole shoes.

It is the aim of the department to encourage participation in all forms of wholesome out-door exercise and to arouse a general interest in

athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for athletic teams, with whose supervision the department is charged.

PUBLIC WORSHIP

Short religious services are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association and the Young Women's Christian Association, are held each week.

GENERAL INFORMATION

It is assumed that all students entering the University are willing to subscribe to the following:

A student is expected to show both within and without the University respect for order, morality, and the rights of others; and such sense of personal honor as is demanded of good citizens and gentlemen.

A pamphlet containing information in regard to the selection of studies, standing and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, athletics, and student organizations may be obtained from the Registrar.

The quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of twenty-two hours of classroom work each week. In the application of this rule, two or three hours of laboratory work count as one hour. *Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise.*

A student obliged to be absent will file in the University office a "Necessary Absence" card signed by the Dean of his college. Freshmen will obtain the signature of the Dean of the University.

A student may be dropped from a course on account of any absence not covered by such a card. A student so dropped will be marked "F" in that course, except that a student who has been dropped from a course within one week of the close of recitations in that subject and

whose rank is "C" or above will be marked "E." Tardiness may be counted as absence.

Written examinations are held immediately before the beginning of the fall semester for all studies in arrears, and during the spring recess for fall semester arrearages. A student absent from the University by permission of the Faculty, at the time of these arrearage examinations, or at the time of a final examination, may have a special examination at such time as may be arranged with the instructor under whom the arrearage occurred. For any special examination a fee of two dollars shall be paid to the University. A student who fails to make up an arrearage in a required subject before the study is again given in class is expected to attend recitations in that study.

Each student is given a report of his work shortly after the close of each semester. Parents or guardians may obtain these reports upon application to the Registrar.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average grade of B after the freshman year. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average of B in all previous work, and an average grade of A or B in all previous work of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester. Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory work may be tested by examination, or thesis, or both, at the discretion of the committee. The faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees

The degree of Bachelor of Arts (B. A.), with specification of the major subject, is conferred upon all students who complete a curriculum in the College of Arts and Sciences. These students are required to fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science (B. S.) in the curriculum pursued is conferred upon students who complete the prescribed work of four years in the Colleges of Agriculture and Technology.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the prescribed work in the College of Law.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the two-year Pharmacy curriculum.

Theses shall be printed, or typewritten in black record unless the subject matter prevents, and the paper used shall be a standard thesis paper 8 x 10½ inches, which may be procured at the University Store. Care should be taken to have a margin of one inch on the inner edge, at least one-half on the outer edge, one and one-half inches at the top, and one inch at the bottom of the page.

If drawings accompany the thesis they may be bound in with the rest of the pages or placed in a pocket in the third page of the cover, or if too many for this, they may be bound separately according to personal instructions of the head of the department.

For further information, see pamphlet relating to degrees and theses.

Candidates for degrees who fail to meet these requirements will not be awarded their degrees at Commencement. A minimum residence of one year is required for the attainment of any Bachelor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each semester or term. Those entering the University after that date must obtain the consent of the committee on advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts, Master of Science, or Master of Laws must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degree.

No work done before the conferring of the bachelor's degree shall be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The courses of study for each candidate must be approved by the committee on advanced degrees not later than the fourth week of the semester or term.

A registration fee of $5 is charged, and an additional fee of $15 for examinations and diplomas is payable upon the completion of the work. One registration fee only is required of graduate students.

The curriculum shall include work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

The candidate shall prepare as a part of his curriculum a satisfactory thesis on some topic connected with the major subject. Theses must be deposited with the Dean of the University not later than 12M. Monday of the week preceding Commencement. The same regulations regarding the size and style of binding, outlined under the Bachelor's degree, apply here.

A pamphlet giving more detailed information regarding advanced degrees may be had upon application.

The professional degrees of Chemical Engineer (Ch. E.), Civil Engineer (C. E.), Electrical Engineer (E. E.), and Mechanical Engineer

(M. E.) may be conferred upon graduates in the curricula of Chemistry or Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering respectively, upon the presentation of satisfactory theses after at least three years of professional work subsequent to graduation. During at least two of the years after graduation the candidate must have occupied a position of responsibility. A fee of $5.00 is required at the time of registration. A fee of $10.75 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

These estimates are prepared upon the basis of students living in university halls.

Estimates of Annual Expenses for Men

	Students from within the State	Students from without the State
Registration	$10 00	$10 00
Incidentals	20 00	20 00
Tuition	30 00	40 00 to $70 00
Laboratory fees	10 00 to $25 00	10 00 to 25 00
Text-books	10 00 to 30 00	10 00 to 30 00
Board 36 weeks @ $3.50	126 00	126 00
Room in a dormitory	36 00 to 45 00	36 00 to 45 00
	$242 00 to $286 00	$252 00 to $326 00

Note. The tuition charge of $70.00 is for technology students from without the State.

Estimates of Annual Expenses for Women

The expenses for women are the same as for men, except that the annual charge for board and room is uniformly $170.00.

Exceptions

By legislative enactment, students in agricultural and home economics curricula are exempted from the payment of tuition charges.

This applies both to students from within and from without the State. For such students the above estimates should be reduced by an amount equal to the tuition charge.

Details of Laboratory Fees

The laboratory charges indicated above are made to cover cost of material used by the students. These charges vary with the subject and length of the course. They are as follows: Agronomy, per course $1.00 to $1.50; Animal Industry, per course, $1.00 to $4.00; Bacteriology, per course, $3.00; Biological Chemistry, $3.00 to $4.00; Biology, per course, $2.00 to $3.00; Chemistry, per course, $2.00 to $5.00; Civil Engineering, per course, $2.00 to $5.00; Electrical Engineering, per course, $2.50; Horticulture, per course, $1.00 to $2.00; Mechanical Engineering, per course, $2.00; Mineralogy, per course, $2.00; Pharmacy, per semester, about $3.50; Physics, per course, $2.50 to $3.50; Shop Work, per course, $4.00 to $5.00. Laboratory fees in Home Economics are stated in connection with the description of that department.

Special Charge

A fee of $2.00 is charged a student for each special examination.

Dormitory Rooms

The rooms in the Mt. Vernon House, Oak Hall, and the middle section of Hannibal Hamlin Hall accommodate two students each. All other rooms accommodate four students each.

Dormitory charges include steam heat and electric lighting. The rooms in the dormitories for men are furnished with beds, mattresses, chiffoniers, desks, and chairs. Each resident in a dormitory has bed linen and three towels laundered each week without extra charge.

Women students not living at home are required to live at the Mt. Vernon House. In exceptional cases women students are allowed to live at some boarding house approved by the President. To secure the reservation of a room in a university dormitory, application, accompanied by a deposit of $5.00, should be made on or before September 1.

Deposits to Cover Expenses

Each student on or before registration day is required to make a deposit in accordance with the following table:

	Students from within the State	Students from without the State
Students in Agriculture	$95 00	$95 00
Students in Forestry	110 00	115 00
Students in Home Economics....	95 00	95 00
Students in Arts and Sciences...	110 00	115 00
Students in Technology	110 00	130 00

For a student not living in a university dormitory the above deposits are reduced by $75.00.

Expenses at the College of Law

For expenses of students in the College of Law, see the article on that college.

Communications

Communications with reference to financial affairs of students should be addressed to the Treasurer, University of Maine, at Orono.

Athletic Contributions

Students generally contribute $10.00 annually to the support of athletics. This is not a university requirement, but is wholly voluntary.

THE KITTRIDGE LOAN FUND

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittridge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security, but personal notes bearing interest at the prevailing rate, should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship, thirty dollars, was endowed by **Frank E.** Kidder, Ph. D., Denver, Colorado, a graduate of the University of the class of 1879, and is awarded to a member of the junior class to be selected by the President and the Faculty.

Western Alumni Association Scholarship, tuition for the sophomore year, is awarded that student pursuing a regular curriculum whose deportment is satisfactory and who makes good progress in his studies during his freshman year.

New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. It has for some years been awarded to the student who excelled in debate.

Pittsburg Alumni Association Scholarship, tuition for one year, is awarded to a member of the junior class in the College of Technology, to be selected by the President and the professors in that college.

Junior Exhibition Prize, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

Sophomore Declamation Prize, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

Walter Balentine Prize, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., LL. D., Geneva, N. Y., a graduate of the University of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

Kennebec County Prize, twenty-five dollars, the gift of Hon. William T. Haines, LL. D., Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best thesis on applied electricity.

Franklin Danforth Prize, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of

1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the agricultural curriculum who attains the highest standing.

Pharmacy Prize, five dollars, is awarded to that student in the pharmacy department who attains the highest standing in chemistry in the last year of his course.

Holt Prizes, the gift of Dr. Erastus Eugene Holt, of Portland, are given to the three students of the senior class who show the greatest improvement in their physical rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body devised by Dr. Holt.

L. C. Bateman Prize, five dollars, is awarded to the student in the College of Agriculture who shall write the best newspaper article of one column length on "How to Keep the Boy on the Farm."

Lewiston Journal Prize, ten dollars, is awarded to a student in the College of Agriculture who shall write the best article on some topic connected with agriculture, the subject and conditions being left to the Dean of the College.

American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the faculty, to the member of the senior class in Pharmacy who has made the best record in his college course.

Father Harrington Prize, twenty dollars, established by Rev. John M. Harrington, pastor of St. Mary's Church, Orono, is given to that student who writes the best essay upon modern literature. It may treat of German, English, French, Spanish, or Italian literature. The essay may be limited to any one of these literatures or to a comparative study of any number of them. This is open to any student in the University.

College of Technology Prize, twenty-five dollars, is awarded to the student who attains the highest rank in the College of Technology and shall make an "M" in track, baseball, or football.

Fraternity Scholarship Cup, presented to the University by the 1910 Senior Skull Society, is awarded at Commencement to that fraternity having the highest standing in scholarship for the preceding calendar year. The cup is to be awarded for eleven years, 1910 to 1920 inclusive. The fraternity to which this cup is awarded the greatest number of times is to be the permanent owner of the cup.

Wingard Cup, the gift of Professor E. R. Wingard, is awarded to that student who has won his "M" in athletics, and who has made the greatest improvement in his studies during the year.

Class of 1908 Commencement Cup is awarded each year to the class having the largest percentage of its membership back for Commencement.

Fraternity Commencement Cup is awarded to the fraternity, the largest percentage of whose alumni register during commencement week.

ADMISSION

General Requirements.—Candidates for admission should apply to the Registrar for an application card. They must pass the required examinations, or present satisfactory certificates of fitness, and make a cash deposit covering the bills of one semester. In the College of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of B must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Graduates of a college of equivalent standing who wish to enter an agricultural or engineering course are admitted to the junior class without examination, provided their course has covered a sufficient amount of work in mathematics, physics, chemistry, and biology.

Special Recommendations.—A good preparation in algebra and geometry is most important for those who expect to enter engineering curricula.

The school should give a part of the work in algebra and geometry, or a review of these subject, during the last year.

Students preparing to take a major in Greek or Latin should devote especial attention to Greek and Latin composition, Roman history, and Latin pronunciation according to the Roman method.

Admission by Examinations

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct examinations on the days appointed in June. If possible, these examinations should be in charge of the principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately, accompanied by the endorsement of the examiner. The examinations must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Registrar. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their school principals regarding their fitness to take the examinations and to undertake college work.

The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 18-23, 1914. All applications for these examinations must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission of Graduates from Class A Schools in Maine

Graduates of Maine high schools and academies placed by the State Superintendent of Schools in Class A may be admitted upon their school records, provided they have pursued a course of study including all the subjects required for admission to the college that they propose to enter, and a sufficient number of the elective subjects to make a total of fourteen units. If the high school record satisfies the specific requirements for the curriculum that they wish to pursue in the University, such candidates may have credit towards admission for any subject that has been credited toward their graduation.

The school record of the candidate must be certified by the Principal, upon blanks furnished by the University, and should be submitted before August 1st.

Admission from Schools in Other States

Graduates of schools outside of Maine will be accepted upon the same terms that are granted them by colleges of good standing within their own states.

Certificates will not be accepted for non-graduates except in unusual cases, and then only provided the candidate is expressly recommended for admission by the Principal of the high school from which he comes. Certificates must be made out on blanks furnished by the University.

ENTRANCE REQUIREMENTS

To gain admission to any of the curricula leading to the degree of Bachelor of Arts or Bachelor of Science, 14 units must be offered by the candidates, according to the following schedules (to count one unit, a subject must be pursued for one school year, with five recitation periods a week):

For the Bachelor of Arts Curricula

Required Subjects

Foreign languages	count	4 units
English	counts	3 "
History	"	1 unit
Mathematics	"	2½ units

Not less than two units of any foreign language may be offered. Credit for advanced work will be accepted at the rate of one unit for each year of work.

Optional Subjects (3 1-2 units to be chosen)

Greek	counts	2 or 3	units
Latin	"	2, 3 or 4	"
French	"	2, 3 or 4	"
German	"	2, 3 or 4	"
Advanced algebra	"	½	"
Trigonometry	"	½	"
Chemistry (including note-book)	"	1	"
Physics (including note-book)	"	1	"
Physiography (one-half year or one year)	"	½ unit or 1	"
Biology (including note-book)	"	1	"
Botany (including note-book)	"	1	"
Zoölogy (including note-book)	"	1	"
Physiology	"	½	"
Solid geometry	"	½	"
Ancient history (1 year)	"	1	"
English history (1 year)	"	1	"
American history and civil government (1 year)	"	1	"
Mediæval and modern history	"	1	"

The requirement in history must include a year of Greek and Roman history, or a year of English history, or a year of mediæval and modern history, or a year of American history and civil government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

FOR THE BACHELOR OF SCIENCE CURRICULA

Required Subjects

English	counts	3	units
*Algebra	"	1½	"
Plane geometry	"	1	unit

*Candidates who have had two full years of algebra, including a review during the last year, and the use of an advanced text-book, may receive credit of two units. Such a course is recommended for those who wish to pursue a curriculum in engineering or chemistry.

Solid geometry (College of Technology except Pharmacy)	counts	½ unit
French, German, or Spanish (two years of one)	"	2 units
Sciences	"	1 unit
History	"	1 "

Optional Subjects (4 or 4 1-2 units to be chosen)

Candidates entering a B. S. curriculum and offering four years of Latin may complete their entrance credits without a modern language, but must take in college the equivalent of the modern language entrance requirement in addition to the language scheduled in their college curriculum.

Each year of French	counts	1 unit
" " German	"	1 "
" " Latin	"	1 "
" " Greek	"	1 "
Advanced algebra	"	½ unit
Trigonometry	"	½ "
**Mechanical drawing (for technical courses)	"	½ "
**Manual training (for technical courses)	"	½ "
Chemistry (including note-book)	"	1 "
Physics (including note-book)	"	1 "
Physiography (one-half year or one year)	counts	½ unit or 1 unit
Biology (including note-book)	counts	1 "
Botany (including note-book)	"	1 "
Zoölogy (including note-book)	"	1 "
Physiology	"	½ "
Roman history	"	½ "
Greek history	"	½ "
English history	counts	½ or 1 "
American history and civil government	"	½ " 1 "

Credit for industrial and commercial subjects will be given when taken as a part of a regular course of study, and the total credit for these subjects will be limited to four units.

** Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing on the basis of one-half unit for five forty-five minute periods per week for one year in one subject taken in the high school.

Candidates for admission, who are well prepared in all the required subjects, but whose high school course has included other subjects, instead of some of the electives mentioned above, will be allowed to substitute such of these as will furnish a real equivalent. Each case of such proposed substitution will be considered upon its merits.

Candidates for the two years CURRICULUM IN PHARMACY must be at least seventeen years of age, and must have successfully completed at least two years in an approved high school.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject:

Languages

ENGLISH.—The entrance examination in English presupposes courses in composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in composition particularly is of slow growth, and requires almost daily cultivation during a long period of time. Books, to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course such work in the elements of rhetoric as, for example, is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination will include questions on the syntax of sentences, and on general grammatical principles.

The grammatical sense is slowly acquired. Grammar, therefore, should be studied in the early grades and kept up from year to year and not formally introduced in some one grade, as the seventh or eighth.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungram-

matical English. Prospective candidates are advised to give especial attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The candidate is not expected to have a detailed knowledge of these books, but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1913-1915 the books in the A list are as follows:

Two books to be selected from each group.

GROUP I

(For any unit of this group a unit from any other group may be substituted)

Old Testament—Comprising the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther.

Homer—The Odyssey. (English translation.) With the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; The Iliad, (English translation) with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI.

Virgil—Æneid. (English translation.)

GROUP II

Shakespeare—Merchant of Venice, Midsummer-Night's Dream, As You Like It, Twelfth Night, King Henry V, Julius Cæsar.

GROUP III

Defoe—Robinson Crusoe, Part I.
Goldsmith—The Vicar of Wakefield.
Scott—Ivanhoe or Quentin Durward.
Hawthorne—The House of the Seven Gables.

Dickens—David Copperfield, or A Tale of Two Cities.
Thackeray—Henry Esmond.
Gaskell (Mrs.)—Cranford.
Eliot, George—Silas Marner.
Stevenson—Treasure Island.

Group IV

Bunyan—Pilgrim's Progress, Part I.
Addison, Steele, and Budgell—The Sir Roger de Coverley Papers in "The Spectator."
Franklin—Autobiography.
Irving—Sketch-Book.
Macaulay—Essays on Lord Clive and Warren Hastings.
Thackeray—English Humorists.
Lincoln—Selections from. Including the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate.
Parkman—The Oregon Trail.
Thoreau—Walden.
Huxley—Autobiography and Selections from Lay Sermons, including the Addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk.
Stevenson—An Inland Voyage, and Travels with a Donkey.

Group V

Palgrave—Golden Treasury (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns.
Gray—An Elegy in a Country Churchyard, and Goldsmith—The Deserted Village, combined.
Coleridge—The Rime of the Ancient Mariner, and Lowell—The Vision of Sir Launfal, combined.
Scott—The Lady of the Lake.
Byron—Childe Harold, Canto IV, and the Prisoner of Chillon.
Palgrave—Golden Treasury (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley.
Poe—The Raven; Longfellow—The Courtship of Miles Standish, and Whittier—Snow Bound, combined.

Macaulay—Lays of Ancient Rome, and Arnold—Sohrab and Rustum, combined.

Tennyson—Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur.

Browning—Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Riel, Pheidippides, My Last Duchess, Up at a Villa, Down in the City.

The B list is for *study:* Shakespeare's Macbeth; Milton's Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address, and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

French.—The admission requirements in elementary and intermediate French are those recommended by the Modern Language Association of America.

I. Elementary French.—At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs; prepositions, and conjunctions; order of words in the sentences, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or histor-

ical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *le Roi des montagnes;* Bruno, *le Tour de la France;* Daudet, Easier Short Tales; De la Bédollière, *La Mère Michel et son chat;* Erckmann-Chatrian's Stories; Foa, *Contes biographiques* and *le Petit Robinson de Paris;* Foncin, *le Pays de France;* Labiche and Martin, *la Poudre aux yeux* and *le Voyage de M. Perrichon;* Legouvé and Labiche, *la Cigale chez les fourmis;* Malot, *Sans famille;* Mairet, *la Tâche du petit Pierre;* Mérimée, *Colomba;* Extracts from Michelet; Sarcey, *le Siège de Paris;* Verne's Stories.

II. Intermediate French.—At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant pratice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate proportions; writing from dictation.

Suitable texts are: About's Stories; Augier and Sandeau, *le Gendre de M. Poirier;* Béranger's Poems; Corneille, *le Cid* and *Horace;* Coppée's *Poems;* Daudet, *la Belle Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's Letters; Hugo, *Hernani* and *la Chute;* Labiche's Plays; Loti, *Pêcheur d'Islande;* Mignet's Historical Writings; Molière, *l'Avare* and *le Bourgeois gentilhomme;* Racine, *Athalie, Andromaque,* and *Esther;* George Sand's Plays and Stories; Sandeau, *Mademoiselle de la Seiglière;* Scribe's Plays; Thierry, *Récits;* Vigny, *la Canne de jonc;* Voltaire's Historical Writings.

At the end of the fourth year the pupils should be able to read at sight, with the help of a vocabulary of special or technical expressions, difficult French not earlier than that of the seventeenth century; to

write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: Beaumarchais's *Barbier de Séville;* Corneille's Dramas; the elder Dumas's Prose Writings; the younger Dumas's *la Question d' argent;* Hugo, *Ruy Blas,* Lyrics, and Prose Writings; La Fontaine's Fables; Lamartine, *Graziella;* Marivaux's Plays; Molière's Plays; Musset's Plays and Poems; Pellissier, *Mouvement littéraire au XIX siècle;* Renan, *Souvenirs d' enfance et de jeunesse;* Rousseau's Writings; Sainte-Beuve's Essays; Taine, *Origines de la France contemporaine;* Voltaire's Writings; Selections from Zola, Maupassant, and Balzac.

The examinations of the College Entrance Certificate Board in elementary French will be accepted for two units, and that in intermediate and advanced French for two additional units.

GERMAN.—The admission requirements in elementary and advanced German are those recommended by the Modern Language Association of America.

I. Elementary German.—The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar; that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more unusual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Anderson, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schwiegersohn;* Gerstäcker, *Germelshausen;* Heyse, *L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Seidel, *Märchen;* Stokl, *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;* Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should predominate. A good selection of reading matter for the second year would be Andersen, *Märchen* or *Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year may be selected from such work as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Ver-*

gangenheit, Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen; Fouqué, *Undine;* Gerstäcker, *Irrfahrten;* Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnhelm;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen, Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterscher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for two units, and that in advanced German for one additional unit.

Latin—The entrance examination in Latin will consist of four parts as follows:

1. An examination on the elements of Latin grammar and easy translations.

2a. An examination in sight translation of Latin prose suited to test the ability of a candidate who has read from Cæsar (Gallic War and Civil War) and Nepos (Lives) an amount not less than Cæsar, Gallic War, I-IV.

b. Questions on the ordinary forms and constructions of Latin grammar and the translation of easy English sentences into Latin.

3a. An examination on Cicero, speeches for the Manilian Law and for Archias, with questions on subject-matter, literary and historical allusions, and grammar.

b. An examination in sight translation of Latin prose adapted to candidates who have read from Cicero (speeches, letters, and De Senectute) and Sallust (Catiline and Jugurthine War) an amount not less than Cicero, speeches against Catiline I-IV, for the Manilian Law, and for Archias.

c. A test in writing simple Latin prose which shall demand a thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school.

4a. An examination on Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allustions, and prosody.

b. An examination in sight translation of Latin poetry adapted to candidates who have read from Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia) an amount not less than Vergil, Æneid, I-VI.

A candidate may obtain separate credit for each part. Each represents a year's work and entrance credit for one unit.

In parts 2 and 3 candidates must deal satisfactorily with both the sight and set passages, or they will not be given credit for either.

Greek.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescribed.

History

Greek History.—History of Greece, to the capture of Corinth, 146 B. C. Myers, Morey, of Botsford.

Roman History.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

English History.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

United States History and Civil Government.—A knowledge such as may be obtained from the works of Fiske, Hart, Montgomery, or McLaughlin.

Mathematics

Algebra.—The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and

least common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending on quadratic equations; the binomial theorem for positive integral exponents; the formulas for the *n*th term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils are required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Plane Geometry.—The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

Advanced Algebra.—Permutations and combinations, limited in simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations with graphical methods, as is necessary for their treatment, including Descartes's rules of signs and Horner's method, but not Sturm's functions or multiple roots.

Sciences

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoöloy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy; but in such cases it must be treated as an integral part of the subject under consideration.

* Chemistry.—The necessary ground is covered by the following textbooks; Brownlee and others, Hessler and Smith, McPherson and Henderson, Newell.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

---

* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certified in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

The requirements in botany and zoölogy are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the board. The note-book should include properly labelled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

ORGANIZATION OF THE UNIVERSITY

The University is divided for purposes of administration into the Colleges of Agriculture, Arts and Sciences, Law, and Technology, and the Maine Agricultural Experiment Station. The policies of the University as a unit are determined by the Board of Trustees and the General Faculty, but each division regulates those affairs which concern itself alone.

College of Agriculture

Curricula in **Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, Poultry Husbandry,** and **for Teachers of Agriculture.**

Two Years Course in Home Economics for Teachers; School Course in Agriculture (two years).

Short Courses; Farmers' Week; Correspondence and Lecture Courses; Demonstration Work.

College of Arts and Sciences

Major subjects may be selected in **Biology, Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics,** and **Romance Languages.**

College of Law

This College is located in Bangor.

College of Technology

Curricula in **Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering,** and **Pharmacy,** and **Two Years Curriculum in Pharmacy.**

Maine Agricultural Experiment Station

Offices and principal laboratories in Orono; Highmoor Farm in Monmouth.

Graduate Courses leading to the Master's degree are offered by various departments.

Summer Term of six weeks.

GENERAL STATEMENT

The College of Agriculture, the College of Arts and Sciences, and the College of Technology offer four years curricula leading to the Bachelor's degree. The College of Law offers a three years curriculum leading to the Bachelor's degree.

The college year, except for the College of Law, is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for a semester in the College of Arts and Sciences is fourteen hours a week (exclusive of physical training and military science) leading to two and four-fifths credits. In the College of Agriculture and the College of Technology the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work not requiring preparation counts as half time, unless otherwise specified. Such subjects are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

Except in the College of Law, the two years Pharmacy Curriculum, and the School Course in Agriculture, candidates for graduation are required to complete a four years curriculum of study by securing twenty-five or thirty credits, according to the college in which they are registered.

The College of Arts and Sciences has the following graduation requirements: (One year's work in college is equivalent to two years' work in preparatory school.)

1. Language Group.—This is composed of courses in language and literature, including all the courses offered in the departments of English, German, and Romance Languages, and such courses offered by the departments of Greek and Latin as deal with the Greek and Latin languages and literatures, or presume some knowledge of these languages.

2. Science and Mathematics Group.—This is composed of the courses offered in mathematics and the biological and physical sciences, including all the courses offered by the departments of Mathematics, Biology, Chemistry, Biological Chemistry, and Physics.

3. Social Science Group.—This is composed of the courses offered in the departments of History, Economics and Sociology, Philosophy, Education, and Bibliography; and the courses in History, Archaeology, Fine Arts, and Biblical Literature offered in other departments and not included in the first group.

Every candidate for the Bachelor of Arts degree is required to complete the following amount of work in college: (a) eight hours prescribed in English; (b) ten or sixteen hours elected in group 1, of which six or ten hours must be in foreign languages; (c) ten hours elected in group 2; (d) ten hours elected in group 3; (e) military science and tactics, two years, three hours a week; (f) physical training, one year, two hours a week.

A student who enters college with a minimum of four units credit in foreign languages shall be required to elect sixteen hours in group 1, of which at least ten hours shall be in foreign languages. A student who enters with more than the minimum of four units credit shall be required to elect at least ten hours in group 1, of which at least six hours shall be in foreign language.

4. Military Science and Tactics, two years, three hours a week.

5. Physical Training, one year, three hours a week.

The following courses are open to freshmen in the College of Arts and Sciences; Bibliography 1; Biology 1; Chemistry 1, 2, 3, 4, 14, 15; English 3, 4, 1a, 1b, 6, 7; German 1, 2; Greek 1, 2; History 1, 2, 3, 4, 6, 7; Latin 1, 2; Mathematics 2, 3, 1, 6, 19; Philosophy 5b; Physics 4, 5, 6; Romance Language 1, 2.

The College of Agriculture has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two or three years.

2. Mathematics, the equivalent of one-half year, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French or German), the equivalent of one-half year, five hours a week.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, three hours a week.

The College of Technology has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two years.

2. Mathematics, except in Chemistry and Chemical Engineering where one and two-fifths years are required, and Pharmacy where one year is required, two years, five hours a week.

3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (French and German), the equivalent of one college year of each, five hours a week taken in college or preparatory school. Candidates offering one full year of the second language for admission must take the equivalent of a five hour year in that language in college A student in German or French must receive at least two credits in the subject to count it toward a degree.

5. Military Science and Tactics, two years, three hours a week.

6. Physical Training, one year, three hours a week.

The science requirement in the Colleges of Agriculture and Technology demands a year's work in some one science, and is not fulfilled by fractions of a year's work in two or more sciences. In making up the language requirement, work done in preparation for college may be counted, but two years' preparatory study will be reckoned as one year of college work.

Twenty-five credits (one credit is given for a recitation course that meets five hours a week, or for a laboratory course that meets at least ten hours a week, for one-half year) are required for graduation in the College of Arts and Sciences; thirty credits are required for graduation in the College of Technology, and the College of Agriculture.

The requirements for the College of Law are stated in connection with the description of that College.

COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

LEON STEPHEN MERRILL, M. D.
Director of Agricultural Extension Service
DEAN
LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry
FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*
JOHN MANVERS BRISCOE, M. F. *Professor of Forestry*
GEORGE EDWARD SIMMONS, M. S. *Professor of Agronomy*
LAMERT SEYMOUR CORBETT, M. S.
Professor of Animal Industry
BLISS S BROWN, M. S. *Professor of Horticulture*
EDSON FORBES HITCHINGS, C. E., M. S.
Associate Professor of Horticulture
ALICE MIDDLETON BORING, PH. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
RALPH WOODBURY REDMAN, B. S.
Assistant Director of Agricultural Extension Service
CORNELIA PALMER *Assistant Professor in Home Economics*
HAROLD SCOTT OSLER, B. S. *Assistant Professor of Agronomy*
HOWARD MADISON PARSHLEY, A. M. *Instructor in Zoölogy*
VICTOR GEORGE AUBRY, B. S. *Instructor in Animal Industry*
HARRY WOODBURY SMITH, B. S. *Instructor in Bacteriology*

DOROTHEA BEACH *Instructor in Home Economics*
ERIC NICHOLS BOLAND, M. S. *Instructor in Animal Industry*
CARLETON WHIDDEN EATON, A. B., M. F.
Instructor in Forestry
ORVILLE ALVIN JAMISON, B. S. *Instructor in Animal Industry*
EARL JONES, M. S. *Instructor in Agronomy*
LILIAN NANCY RANDALL *Instructor in Home Economics*
LAWRENCE VIVIAN JONES, LL. B. *Lecturer on Forestry Law*
FRANK HAROLD BICKFORD
State Leader, Boys' and Girls' Agricultural Clubs
CLARENCE ALBERT DAY
Director Farm Demonstrations, Washington County
ARTHUR LOWELL DEERING, B. S.
Director Farm Demonstrations, Kennebec County
MAURICE DANIEL JONES, B. S.
Director Farm Demonstrations, Penobscot County
ERNEST MANZER STRAIGHT, B. S. A.
Director Farm Demonstrations, Cumberland County
GEORGE ALBERT YEATON
Director Farm Demonstrations, Oxford County

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agricultural Extension, Agronomy, Animal Industry, Biological and Agricultural Chemistry, Biology, Farm Management and Agricultural Engineering, Forestry, Home Economics, Horticulture, Veterinary Science and Bacteriology. The aim of the college is to train young men for service as farmers, teachers of agriculture and the allied sciences in schools and colleges, investigators in the agricultural experiment stations, and foresters; and to prepare young women to become teachers of home economics and to comprehend the problems of administration in the home and in public institutions. On entering either a four years curriculum or two years School Course in Agriculture a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the faculty of the college.

The courses of instruction are organized as follows:

1. Regular Curricula
   - The four years general curricula in Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, and Poultry Husbandry, and the four years curriculum for Teachers in General Agriculture
   - The two years Teachers' Course in Home Economics
   - The two years School Course in Agriculture
   - The short winter courses in General Agriculture, Dairying, Horticulture, and Poultry Management
   - Farmers' week

2. Extension Courses
   - The correspondence courses
   - The lecture courses
   - The traveling schools
   - The demonstration work
   - The coöperative experiments

THE COLLEGE CURRICULA

The college curricula are designed for those who wish to follow general farming, animal husbandry, dairy husbandry, poultry husbandry, horticulture, home economics, chemistry as related to experiment station work, biological chemistry, bacteriology and veterinary science, biology, farm management, and forestry either as a business or as a profession.

Certain studies are fundamental to all work in agricultural lines. As many as possible of these studies are offered in the first two years, during which time the student is necessarily given no choice of subjects. By the beginning of the junior year each student must decide whether he is to specialize in Agronomy, Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Horticulture, or Biology. To specialize in any one of these lines, he must during his junior and senior years take the studies given in the schedules which follow.

Students in agiculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. Those intending to take this course must elect a preparatory course in quantitative chemical analysis.

One of the following curricula, embracing 150 college hours each, is required for the students taking the four years curricula in agriculture. It is recommended that the subjects be taken in the order here given. The elective subjects are selected with the advice of the major instructor.

Curriculum for the First Two Years for All Students Taking Four Years Curricula in Agriculture

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3, †4	2	Animal Industry 1	2
Biology 1	5	Animal Industry 2, †2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, †4	2	Chemistry 2	3
Drawing 10a, *3	1	Chemistry 4, †4	2
English 3	2	Drawing 10b, *3	1
Military 1, *3	1	English 4	2
Modern Language	3	Military 2, *3	1
Physical Training *2	½	Modern Language	2
	18½	Physical Training *2	1
			20

SOPHOMORE YEAR

Agronomy 1	2	Agronomy 5, 2, †2	3
Agronomy 2, *3	1	Chemistry 6	5
Animal Industry 3	2	English 1b	1
Animal Industry 4, †2	1	Farm Management 4, †4	2
Biology 18	2	Horticulture 1, 2, *3	3
English 1a	1	Mathematics 3	2
Mathematics 2	3	Military 2, *3	1
Military 1, *3	1	Poultry Husbandry 6	2
Poultry Husbandry 1	1	Poultry Husbandry 6a, †2	1
Poultry Husbandry 1a, †2	1		20
Electives	5		
	20		

Beginning with the fall of 1914, the following curriculum for the sophomore year will be substituted for the above:

SOPHOMORE YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 1	2	Agronomy 5, 2, †2	3
Agronomy 2, *3	1	Biological Chemistry 8, 3, †4	5
Animal Industry 3	2	English 1b	1
Animal Industry 4, †2	1	Farm Management 4, †4	2
Biological Chemistry 7	2	Horticulture 1, 2, *3	3
Biology 18	2	Mathematics 3	2
Chemistry 5	3	Military 2, *3	1
English 1a	1	Poultry Husbandry 6	2
Mathematics 2	3	Poultry Husbandry 6a, †2	1
Military 1, *3	1		20
Poultry Husbandry 1	1		
Poultry Husbandry 1a, †2	1		
	20		

Curriculum for Students Specializing in Agronomy

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 13, 1, †2	2	Agricultural Chemistry 3	2
Animal Industry 7, 2, *6	4	Agronomy 6, 1, †2	2
Biological Chemistry 1	5	Agronomy 7	2
Biology 10	4	Agronomy 10, 1, †2	2
English 14	2	Bacteriology 1, †6	3
Electives	1	Biological Chemistry 2, †6	3
	18	Biology 11	4
		English 17	2
			20

SENIOR YEAR

Agronomy 4	2	Animal Industry 5	2
Agronomy 9, 1, †2	2	Biology 8	4
Farm Management 2	3	Farm Management 1	3
Thesis	3	Farm Management 5	3
Electives	7	Thesis	3
	17	Electives	2
			17

Curriculum for Students Specializing in Animal Industry

Animal Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 7, 2, *6	4	Agricultural Chemistry 3	2
Bacteriology 2	1	Animal Industry 5	2
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 2	4	Biological Chemistry 2, †6	3
English 14	2	Biology 6	4
Farm Management 2	3	English 17	2
	19	Veterinary Science 6	3
		Veterinary Science 8	1
			20

SENIOR YEAR

Agronomy 4	2	Animal Industry 12, †2	1
Animal Industry 9	2	Animal Industry 11	2
Veterinary Science 9	2	Biology 8	4
Bacteriology 3, †6	3	Farm Management 5	3
Veterinary Science 7	2	Thesis	3
Veterinary Science 8	1	Electives	2
Thesis	3		
Electives	3		15
	18		

Dairy Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 7, 2, *6	4	Agricultural Chemistry 3	2
Bacteriology 2	1	Animal Industry 5	2
Biological Chemistry 1	5	Animal Industry 8, *3	1
English 14	2	Bacteriology 1, †6	3
Farm Management 2	3	Biological Chemistry 2, †6	3
Electives	4	English 17	2
		Veterinary Science 6	3
	19	Veterinary Science 8	1
		Electives	2
			19

SENIOR YEAR

Agronomy 4	2	Bacteriology 4	2
Animal Industry 13, 2, *6	4	Farm Management 5, 2, *3	3
Animal Industry 10	3	Thesis	3
Bacteriology 3, †6	3	Electives	8
Veterinary Science 7	2		
Veterinary Science 8	1		16
Thesis	3		
	18		

Poultry Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 7, 2, *6	4	Agricultural Chemistry 3	2
Bacteriology 2	1	Animal Industry 5	2
Biological Chemistry 1	5	Bacteriology 1, †6	3
Biology 2	4	Biological Chemistry 2, †6	3
English 14	2	Biology 6	4
Poultry Husbandry 2	1	English 17	2
Poultry Husbandry 2a, †2	1	Poultry Husbandry 4	2
	18		18

SENIOR YEAR

Agronomy 4	2	Biology 8	4
Farm Management 2	3	Farm Management 5	3
Poultry Husbandry 10	2	Poultry Husbandry 9	2
Poultry Husbandry 10a, †2	1	Poultry Husbandry 9a, †2	1
Poultry Husbandry 5	2	Veterinary Science 5	2
Thesis	3	Thesis	3
Electives	5	Electives	3
	18		18

Curriculum for Students Specializing in Horticulture

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Agricultural Chemistry 3	2
Biology 10	4	Animal Industry 5	2
English 14	2	Bacteriology 1, †6	3
Horticulture 2	3	Biological Chemistry 2, †6	3
Horticulture 11	3	Biology 11	4
Electives	2	English 17	2
	19	Horticulture 4	3
		Horticulture 7	2
			21

SENIOR YEAR

Agronomy 4	2	Biology 8	4
Animal Industry 7, 2 *6	4	Horticulture 5	3
Farm Management 2	3	Horticulture 6	3
Horticulture 3	3	Thesis	3
Horticulture 8	3	Electives	1
Thesis	3		14
	18		

Curriculum for Students Taking Major Work in Biology

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biological Chemistry 1	5	Animal Embryology 6	4
English 14	2	Biological Chemistry 2, †6	3
Modern Language	3	English 2b	1
Plant Histology 10	4	Modern Language	3
Vertebrate Zoölogy 2	4	* Plant Pathology 16 / or / Electives	3
	18	Plant Physiology 11	4
			18

SENIOR YEAR

Animal Histology 3	4	Animal Physiology 5	5
Advanced Zoölogy or Botany	3	Bacteriology 1, †6	3
Bacteriology 2	2	Entomology 8	4
Geology 5	3	* Plant Pathology 16 / or / Elective	3
Thesis	3	Thesis	3
Electives	3½		
	18½		18

Curriculum in Agriculture for Those Who Intend to Become Teachers of this Subject in the Public Schools

This curriculum is offered in response to a call for men capable of teaching all branches of elementary agriculture in high schools or academies. In order to receive a degree, 150 college hours, or 30 credits, must be completed.

* Given in alternate years.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3, † 4	2	Animal Industry 1	2
Biology 1	5	Animal Industry 2, † 2	1
Chemistry 1	2	Biology 1	5
Chemistry 3, † 4	2	Chemistry 2	3
Drawing 10a, * 3	1	Chemistry 4, † 4	2
English 3	2	Drawing 10b, * 3	1
Military 1, * 3	1	English 4	2
Modern Language	3	Military 2, * 3	1
Physical Training * 2	½	Modern Language	2
	18½	Physical Training * 2	1
			20

SOPHOMORE YEAR

Animal Industry 3	2	Education 2	3
Animal Industry 4, † 2	1	English 1b	1
Education 1	3	Horticulture 1	4
English 1a	1	Mathematics 1	3
Horticulture 2	3	Mathematics 3	2
Mathematics 2	5	Mech. Engineering 2, * 4	1
Mech. Engineering 1b, * 4	1½	Military 2, * 3	1
Military 1, * 3	1	Poultry Husbandry 6	2
Poultry Husbandry 1	1	Poultry Husbandry 6a, † 2	1
Poultry Husbandry 1a, † 2	1		18
	19½		

JUNIOR YEAR

Agronomy 1	2	Agronomy 10, * 3	1
Agronomy 2, * 3	1	Chemistry 6	5
Biology 15	3	Education 8	2
Education 5	3	English 17	2
English 14	2	Modern Language	2
Geology 5	3	Veterinary Science 6	3
Horticulture 3	3	Veterinary Science 8	1
Modern Language	3	Electives	1
	20		17

SENIOR YEAR

Agronomy 4	2	Animal Industry 5	2
Animal Industry 7	2	Animal Industry 8, *3	1
Biological Chemistry 1	5	Agricultural Chemistry 3	2
Horticulture 4	3	Bacteriology 1, †6	3
Physics 4	5	Biology 8	4
Veterinary Science 7	2	Physics 5, *5	2
Veterinary Science 8	1	Electives	3
	20		17

The Forestry Curriculum

A complete undergraduate curriculum is arranged which will serve as the basis not only for practical work in forestry, but also for a liberal education. During the first two years much attention is given to biology and civil engineering, both of which are important fundamental subjects upon which are built the more technical forestry courses. A knowledge of the principles of forestry in its different branches is gained by the student, and considerable practical work is done in the forest. The woodlands belonging to the University, together with adjacent lands covered by young forest, furnish a field for the study of many forest problems. Field trips are made and demonstration thinnings and plantations made at various places throughout the State.

The instruction in this department consists of lectures, recitations, laboratory, and field work; the latter consuming a considerable portion of the scheduled time during the junior and senior years.

There are good openings for students to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying the expense of their university course.

Besides the prescribed work in other departments, courses 4 to 14 inclusive are required of all students majoring in Forestry, and courses 3 and 15 are recommended as electives for these students. Course 1 is open to all students, but is not required of students majoring in Forestry.

At graduation the student receives the degree of Bachelor of Science in Forestry. A special bulletin, giving detailed descriptions of all the courses as well as of the equipment, is issued by the department and will be sent free to any address upon request.

Curriculum in Forestry

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3 †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3	2	English 4	2
Mathematics 2	5	Mathematics 1	3
Military *3	1	Mathematics 3	2
Physical Training	½	Military *3	1
		Physical Training	1
	19½		21

SOPHOMORE YEAR

Agronomy 1	2	Biology 8	4
Agronomy 2	1	Biology 17	4
Biology 17	4	Civil Engineering 2b, 2c	1½
Civil Engineering 1a, 2a	2½	English 1b	1
English 1a	1	English 2b	2
English 2a	2	Horticulture 1	3
History 6	3	Military *3	1
Military *3	1	Modern Language	2
Modern Language	3		
	19½		18½

JUNIOR YEAR

Biology 10	4	Biology 11 or 16	4 or 3
Civil Engineering 4b, 4c	2	Civil Engineering 9a	1
Geology 5	3	Civil Engineering 9b	2
Forestry 10	2	Forestry 11	2
Horticulture 8	3	Modern Language	2
Modern Language	3	Physics 6	2
Forestry 10a	2	Forestry 11a	2
		Electives	1
	19		15 or 16

SENIOR YEAR

Biology 18	2	Biology 11 or 16	4 or 3
Economics 1a	2	Economics 6	3
Forestry 4	2	Forestry 7	2
Forestry 6	2	Forestry 9, *6	2
Forestry 8, *6	2	Forestry 13	1
Forestry 12	5	Forestry 15	1
Forestry 5	1	History 2	3
Forestry 17	1	Thesis	5
	17		20 or 21

Four Years Curriculum in Home Economics

This curriculum, leading to a Bachelor of Science degree, prepares women to teach home economics in elementary, high and normal schools, and in colleges. It gives instruction in cookery, dietetics, marketing, serving, household economics, laundering, sewing, and handwork. A foundation for the practical work is laid in pursuing a thorough course in biology, chemistry, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this curriculum must meet the regular college requirements.

Laboratory fees, to cover the cost of materials used, are as follows: Cookery courses 1, 2, 5, 6, 7, 8, each $6 a semester. Cookery courses 3, 4, each $2.50 a semester. Handwork courses $1 a semester. Household economics 50c. a semester. Laundering $1 a semester. Practical housework $3.50 a semester. Camp cookery $2.00 a semester.

Students expecting to major in home economics should write to the head of the department in regard to equipment.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	3
Chemistry 3 †4	2	Chemistry 4, †4	2
English 3	2	English 4	2
Home Economics 1	4	Home Economics 2	4
Modern Language	3	Modern Language	2
	18		18

SOPHOMORE YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Bacteriology 2	2	Chemistry 6	5
English 1a	1	English 1b	1
English 2a	2	English 2b	2
Home Economics 9 † 4	2	Home Economics 10 † 4	2
Home Economics 12 † 4	2	Home Economics 13 † 4	2
Home Economics 15	2½	Home Economics 16	2½
Mathematics 2	5	Home Economics 20	2
Modern Language	3	Modern Language	2
	19½		18½

JUNIOR YEAR

Biological Chemistry 1	5	Biology 19	2
Home Economics 3	3	Biological Chemistry 2 † 4	2
Home Economics 17	2	Home Economics 4	3
Home Economics 19	1½	Home Economics 18	2
Philosophy 1a	3	Philosophy 1b	3
Physics 4	5	Physics 5	2
		Electives	4
	19½		18

SENIOR YEAR

Economics 1a	2	Education 2	3
Education 1	3	Home Economics 6	1½
Education 5	3	Home Economics 14 † 4	2
Home Economics 5	2½	Home Economics 22	1
Home Economics 11 † 4	2	Home Economics 23	1
Home Economics 21	2	Home Economics 26	3
Home Economics 24	1	Philosophy 4	2
* Home Economics 25	2	Philosophy 14	2
Horticulture 8	3	Elective	1½
Mech. Engineering 20	1		17
	21½		

* Either fall or spring semester.

Two Years Course in Home Economics

This course aims to prepare women for teaching Home Economics in secondary schools. It is offered to those who find it impossible to remain at the University for a longer period. This course does not lead to a degree but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent, and who have some practical knowledge of housework, are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the University, courses in elementary chemistry, physics, and physiology. For information concerning fees, see the four years curriculum.

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1	5	Biology 1	5
Chemistry 1	2	Chemistry 2	2
Chemistry 3, †4	2	Chemistry 4, †4	2
English 3	2	English 4	2
Home Economics 1	4	Home Economics 2	4
Home Economics 9	2	Home Economics 10	2
Home Economics 15	2½	Home Economics 16	2½
	19½		20½

SECOND YEAR

Biological Chemistry 1	5	Biological Chemistry 2, †4	2
Education 1	3	Biology 19	2
Home Economics 7	3	Education 2	3
Home Economics 12	2	Home Economics 6	1½
Home Economics 17	2	Home Economics 8	3
Home Economics 19	1½	Home Economics 13	2
Home Economics 24	1	Home Economics 18	2
* Home Economics 21	2	Home Economics 20	2
Mechanical Engineering 20	1	* Home Economics 25	2
		Home Economics 22	1
	20½		20½

* Either fall or spring semester.

Special Courses in Agriculture and Home Economics

The Special Courses in Agriculture and Home Economics are designed for young men and women who cannot well spend four years in preparation, but who desire to secure special training in this line. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, farm management, general agriculture, or home economics.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course. If they subsequently desire to become candidates for a degree, they will be required to meet all the entrance requirements.

The annual expenses for courses of one year or more are the same as those for students in the four years courses. Tuition is free except in forestry and home economics.

Two Years School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultrymen or gardeners, but who cannot devote time to high school or colleges training.

The same equipment is used as in the four years curricula, but the work is of a more elementary nature. All the classes are separate and distinct from the four years classes, and in no case will college credit be allowed for work done in the school course.

There are no entrance examinations required of those who desire to enter the school course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course, but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work either at the college or on some farm approved by the Faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester		*Spring Semester*	
Animal Industry	3	Animal Industry and Dairy Work	3
Business Arithmetic and Farm Accounts	2	English	3
Carpentry	*3	Farm Botany	2
English	3	Forge Work	*3
Farm Crops	3	Fruit Growing	3
Farm Crops Laboratory	*3	Orchard Practice and Laboratory Work	*3
Fruit Handling	3	Poultry Husbandry	2
Fruit Picking, Packing, and Laboratory Work	*3	Poultry Husbandry Laboratory	†2
Poultry Husbandry	2	Practical Dairying and Stock Management	*3
Poultry Husbandry Laboratory	†2	Soils and Fertilizers	3
Practical Dairying and Stock Management	†2	Soils Laboratory	*3

SECOND YEAR

Animal Industry	3	Animal Industry	3
English	2	English	2
Farm Chemistry	3	Farm Management	3
Farm Crops	2	Farm Management Laboratory	*3
Farm Engineering and Mechanics	1	Forestry	2
Farm Engineering and Mechanics Laboratory	*3	Insects	2
Poultry	2	Poultry Management	2
Practical Dairying and Stock Management	†2	Practical Dairying and Stock Management	†2
Vegetable Gardening	3	Small Fruit Culture and Plant Propagation	3
Vegetable Gardening Laboratory	*3	Small Fruit Culture and Plant Propagation Laboratory	*3
Veterinary Science	3	Veterinary Science	3

Short Courses in General Agriculture, Dairying, Horticulture, and Poultry Management

The short course in general agriculture deals especially with farm crops. Special attention is given to the potato, corn, oat and hay crops,—the preparation of the seed bed, selection of seed, seeding, fertilization, culture, and harvesting. Such general subjects as drainage, maintenance of soil fertility, rotation of crops, control of weeds, etc., are considered. Potato, corn, and small grain judging is made a prominent feature.

The short course in dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen, and others who desire to learn milk testing, butter making, the principles of animal nutrition, and practices of feeding, breeding, judging stock, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and coöperation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort is made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish to gain a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring, judging, killing, and marketing. Supplementing the work of the regular instructors, some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of instruction the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent upon application to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one or more sessions are given up to problems of rural betterment. A section is arranged where home economics for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

Department of Agricultural Extension

This department of the College of Agriculture offers correspondence courses, lecture courses, demonstration work, coöperative experiments, and extension schools in agriculture.

This work is intended to give direct help to those on the farm and in the home; to aid those who desire definite instruction in practical agriculture, animal and dairy husbandry, poultry husbandry, home economics, forestry, and horticulture. It supplements the teaching and experimenting of the College of Agriculture and the Experiment Station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the College or procured from the U. S. Department of Agriculture, or from the various Experiment Stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1—Farm Crops and Crop Production
Course 2—Farm Management
Course 3—Feeding and Breeding of Farm Animals and Dairying
Course 4—Poultry Keeping
Course 5—Fruit Growing
Course 6—Forestry
Course 8—Elementary Agriculture
Course 9—Home Economics
Course 10—Vegetable Gardening
Course 11—The Business of Dairying

Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Demonstration Work

For this work members of the agricultural faculty will make demonstrations, showing, as well as telling, how to solve many practical farm problems. These demonstrations are made on the farms and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing use of Babcock tester); stock judging; corn and small grain judging and breeding; potato judging, breeding, and spraying; orchard spraying, pruning, and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Farm Demonstration Work

In October, 1912, the University entered into a coöperative arrangement with the General Education Board of New York for the organization and direction of farm demonstration work in four counties in

Maine. For this purpose the Board appropriated $8,000, for the year 1912-1913, and it was agreed that the College of Agriculture should assume entire charge of the work, subject to the approval of the Secretary of the Board. The lines of demonstration and the counties in which the work should be undertaken were agreed upon as follows:—

Market gardening and small fruits, Cumberland County

Cropping systems for dairying farms and other general demonstrations, Kennebec County

Orcharding, Oxford County

Potatoes, grains, and grasses, Washington County

Demonstrations are now under way in these four counties on approximately one hundred farms.

For the year 1913-1914 the appropriation for the four counties named has been increased to $10,000, and the College of Agriculture is authorized to employ a fifth man and to undertake demonstrations in Penobscot County. The total appropriation made by the General Education Board for farm demonstration work in Maine for the year 1913-1914 is $12,000.

Boys' Agricultural Clubs

The organization of boys' agricultural clubs is a new line of extension service to be undertaken by the Extension Department of the University during the coming year. This service is made possible through an appropriation by the General Education Board amounting to $2,500. This appropriation is made with the understanding that an assistant shall be employed by the Extension Department of the University, beginning September 1st, to organize Boys' Agricultural Clubs throughout the State and to give such assistance in the work of the Clubs as may be desirable.

Coöperative Experiments

Experiments will be undertaken in coöperation with farmers along such lines as the following: the determination of fertilizing problems; the eradication of noxious weeds; the determination of the best means for increasing the hay crop. To encourage systematic seed improvement the college will each year distribute a large amount of improved seeds of various kinds among such farmers of the State as will under-

take to carry on careful experiments and to make reports of the results obtained at the close of each season.

Experiments with corn, oats, alfalfa, fertilizers, and pastures have been carried on in nearly every county in the State.

During Farmers' Week exhibits are made showing the results of this experimental work. School gardening is encouraged by the distribution of seeds.

Extension Schools in Agriculture

To extend the advantages of agricultural instruction to persons actively engaged in agriculture, the Extension department will conduct a limited number of Three or Six Day Schools in various parts of the State. Members of the agricultural faculty will teach in these schools.

Correspondence

Besides the Demonstration, Correspondence, and Lecture courses, the College of Agriculture welcomes correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

A free monthly publication, "Timely Helps for Farmers," treating of subjects of interest to farmers, is published by the Extension Department and may be secured upon application.

Circulars giving full information upon these subjects will be sent upon request.

DEPARTMENTS OF INSTRUCTION

NOTE.—A star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation.

AGRONOMY

PROFESSOR SIMMONS; ASSISTANT PROFESSOR OSLER

Soils

For undergraduates only

1. SOILS.—Lectures and recitations on the origin, types, physical properties, moisture content, and distribution of soils, and their relation to crop production. The fundamental principles underlying soil management for soil conservation and improvement will be studied. *Two hours a week.* Fall semester.

2. SOILS.—A laboratory course accompanying Course 1, dealing with the soil from the physical standpoint. Some field work is given for the purpose of correlating the laboratory exercises with actual field operations. * *Three hours a week.* Fall semester.

4. SOIL FERTILITY.—This course deals with stable manures, green manures, commercial fertilizers, and soil amendments; also a study of soil organisms as affecting the plant food in the soil. *Two hours a week.* Fall semester.

For graduates and undergraduates

12. Soil Surveying and Mapping.—A study is made of soil types, the principles of correlation and methods of soil surveying and mapping. Lectures and recitations, *two hours a week;* laboratory, * *three hours a week.* Fall semester.

Crops

For undergraduates only

3. Field Crops.—A laboratory course in seed and grain identification, improvement by grading, testing, selecting, and preparing seed for planting. A collection of weeds and their seeds will be required. *Four hours a week.* Fall semester.

5. Field Crops.—A general course including a study of the most important cereals, grass, forage and root crops, their adaptation to systems of rotation, culture and uses, with special reference to New England conditions. Lectures and recitations, *two hours a week;* laboratory, *two hours a week.* Spring semester.

6. Field Crops.—Grasses and Forage Crops.—Lectures and laboratory work dealing with the grasses and forage plants. A study of the hay crop and markets; soiling systems, and their adaptation to local conditions. Lectures and recitations, *two hours a week;* laboratory, *four hours a week.* Last half of spring semester.

7. Field Crops.—Crop Improvement.—A study of the principles and methods involved in field crop improvement. The work of experiment stations in this country and abroad is reviewed. Prerequisites, Agronomy 3 and 5. *Two hours a week.* Spring semester.

9. Field Crops.—Roots and Tubers.—A course dealing with the production, storage, and marketing of roots and tubers. Lectures and recitations, *one hour a week;* laboratory, *two hours a week.* Fall semester.

10. Field Crops.—Corn.—A course dealing with the production of corn, and the care and marketing of the crop. Types and varieties of both field and sweet corn will be considered in this course. Lectures and recitations, *two hours a week;* laboratory, *four hours a week.* First half spring semester.

11. Thesis.—Students majoring in Agronomy will be required to prepare a thesis under the direction of the head of the department. Choice may be had of subjects coming under the division of Farm Crops, Farm Management, or Soils. Choice of subject should be made, and the work definitely planned, before the close of the junior year. *Six hours minimum credit; three hours a week,* fall semester, and *three hours a week* spring semester, senior year.

13. Field Crops.—Judging and Commercial Grading.—Comparative judging of corn, small grains, and potatoes according to standards. A study of market grade requirements. Lectures and recitations, *one hour a week;* laboratory, *two hours a week.* Fall semester.

For graduates and undergraduates

14. Systematic Field Crops.—A course designed for advanced or graduate students preparing for experimental work, teaching, or plant breeding. Students will be expected to grow and collect material under supervision of the department during the summer months. Elective, *two or more hours throughout the year.* Prerequisite, adequate training in botany and in field crops. Time should be arranged with instructor not later than the middle of junior year.

ANIMAL INDUSTRY

Professor Corbett; Mr. Aubry; Mr. Jamison; Mr. Boland

Animal and Dairy Husbandry

For undergraduates only

1. Breeds of Live Stock.—(a) *Dairy Cattle.* A study of dairy types and breeds of dairy cattle; including the development, breed character-

istics, general management, and methods of feeding for dairy production.

(b) *Beef Cattle.* A study of the market classes and grades; breeds of beef cattle including their development and breed characteristics; and general methods used in growing and feeding.

(c) *Sheep.* A study of the market classes and grades; breeds of sheep including the breed characteristics, general management and methods for the production of wool and mutton. *Two hours a week.* Spring semester.

2. Live Stock Judging.—Familiarizing the student with the type and breed characteristics by the use of score cards. Comparative judging and the selection of breeding stock for dairy and beef cattle. This course must be taken in conjunction with Course 1. † *Two hours a week.* Spring semester.

3. Breeds of Live Stock.—(a) *Swine.* A study of the market types; breeds of swine, including their development and breed characteristics; management of breeding stock and methods of feeding for fattening purposes.

(b) *Horses.* A study of the market types and their respective uses; breeds including the development and breed characteristics; general care and handling of breeding and working horses.

(c) *Sheep.* A study of the methods and practices of building up herds and flocks; culling, grading, and general principles of breeding as applied to live stock husbandry. *Two hours a week.* Fall semester.

4. Live Stock Judging.—Familiarizing the student with the type and breed characteristics by the use of score cards. Comparative judging and the selection of breeding stock for sheep, swine and horses. This course must be taken in conjunction with Course 3. † *Two hours a week.* Fall semester.

5. Live Stock Feeding.—A study of the general principles of nutrition as applied to live stock, the composition of feed stuffs, comparison and use of feeding standards; calculating rations; and methods of feeding for economic production. *Two hours a week.* Spring semester.

7. General Dairying.—Given by lectures, assigned readings, recitations, and laboratory practice. Milk: its secretion, composition, properties, pasteurization, separation; dairy practices in handling milk and cream, dairy equipment, use of common dairy machinery; preparation of starters; tests of dairy products for fat (Babcock method), acidity, total solids, common adulterations, and preservatives. Class-room, *two hours a week;* laboratory, * *six hours a week.* Fall semester.

8. Butter Making.—Practice in making starters, ripening cream, churning, and preparing butter for market. Each student is required to make starter and ripen at least four lots of cream. Open to students who have completed Course 7. * *Three hours a week.* Spring semester.

13. Cheese Making.—Lectures, recitations, and laboratory practice on the manufacture and curing of various types of cheeses, including Cheddar and soft cheeses adapted to the New England trade. The laboratory work requires six consecutive hours. Open to students who have completed Course 7. Class-room, *two hours a week;* laboratory, * *six hours a week.* Fall semester.

15. Thesis.—Students specializing in Animal Industry are required to prepare a thesis on some subject approved by the head of the department. *Three hours a week* each semester of the senior year.

For graduates and undergraduates

9. Advanced Live Stock Feeding and Management.—This course must be preceded by Course 5. Nutrition and feeding experiments as well as the methods and practices of the most successful feeders in the production of milk, meat, and the rearing of horses are studied. *Two hours a week.* Fall semester.

10. Dairy Technology.—A study of dairy products other than butter and cheese; dairy by-products; factory machinery and operation; certified milk; markets and marketing; educational work with dairymen; dairy literature. Given by lectures, recitations, assigned readings, and round table conferences. Open to students who have completed Course 7. *Three hours a week.* Fall semester.

11. Advanced Animal Breeding.—The principles and theories of breeding as applied to the live stock industry. The formation of herds and flocks. A study of pedigrees and records, methods of conducting advanced registry tests, keeping breeding records on the farm, and disposal of surplus stock. Elective for those who have completed Courses 1 to 4, inclusive. *Two hours a week.* Spring semester.

12. Advanced Live Stock Judging and Management.—This course gives actual experience in preparation of stock for the show ring and market; show ring judging and demonstration judging; teaching of live stock judging. As far as possible, visits will be made to different live stock farms. † *Two hours a week.* Spring semester.

Poultry Husbandry

For undergraduates only

1. Poultry Breeds and Management.—A general consideration of the present status of poultry keeping in America. A study of the types and breeds of market poultry, including ducks, geese, and turkeys. *One hour a week.* Fall semester.

1a. Laboratory Practice.—The judging of the breeds of poultry, mainly from the utility standpoint; the selection of breeding stock. To be taken with Course 1. † *Two hours a week.* Fall semester.

2. Commercial Poultry Keeping.—Considered as a business, as an investment, as an employment. A consideration of the large successful poultry farms and how they are operated. *One hour a week.* Fall semester.

2a. Laboratory Practice.—The planning and laying out of poultry plants, houses, and fixtures suitable for specializing on a large scale. To be taken with Course 2. † *Two hours a week.* Fall semester.

4. Markets and Marketing.—A consideration of the requirements of the best markets for poultry produce in America, possible improve-

ments, the commission business, cold storage, coöperation. *Two hours a week.* Spring semester.

5. Poultry Literature.—An advanced course in the study of bulletins and reports of the experiment stations in this and other countries, with especial attention to the work of the Maine Experiment Station, poultry papers, and text-books. *Two hours a week.* Fall semester.

6. Poultry Management.—A continuation of Course 1. A study of feeds and feeding, egg production, incubation, brooding, housing, rearing and feeding of young stock, and poultry fattening. *Two hours a week.* Spring semester.

6a. Laboratory Practice.—The drawing of plans of houses and appliances suitable for work on the farm; practice in the mixing of feeds; the examination of incubators and brooders; the killing and dressing of poultry; the handling of eggs for market. To be taken with Course 6. † *Two hours a week.* Spring semester.

9. Incubation and Brooding.—Natural and artificial; history of artificial incubation and brooding; Chinese and Egyptian methods of incubation; modern methods of incubation and brooding; the principles and application. *Two hours a week.* Spring semester.

9a. Laboratory Practice.—Continuation of Course 10a, including the selection of eggs to set; operation of incubators and brooders; setting of hens and other work immediately connected with the operation of brooders. This course must be preceded by Course 10a. *Time to be arranged* with the instructor. Spring semester.

10. Breeds and Breeding.—A study of the types and breeds of market and fancy poultry; their history, development, and breed characteristics; mating; the application of the principles of breeding to both fancy and utility poultry. *Two hours a week.* Fall semester.

10a. Laboratory Practice.—The care and management of a pen of birds under the supervision of the instructor, keeping an itemized account of expenses and receipts. Advanced work in judging and scoring will also be given in this course. Open to men majoring in

Poultry Husbandry. *Time to be arranged* with the instructor. Fall semester.

11. Thesis.—Original work on some subject chosen by the student under the direction of the head of the department.

BACTERIOLOGY AND VETERINARY SCIENCE

Professor Russell; Mr. Smith

For undergraduates only

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. This course may be taken alone or in connection with Course 2. † *Six hours a week.* Spring semester, and † *six hours a week.* Fall semester.

2. Bacteriology.—A lecture course open to all students. It should be elected by students taking Course 1 as well as by students who cannot take a laboratory course. Subjects considered will include history of bacteriology; classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products; the relation of bacteria to health and disease; immunity. *Two hours a week.* Fall semester.

For graduates and undergraduates

3. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogenic bacteria. Course 1 is a prerequisite. † *Six hours a week.* Spring semester.

Primarily for graduates

4. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

For undergraduates only

5. Veterinary Science.—This course deals with the anatomy, physiology, and diseases of poultry. *Two hours a week.* Spring semester.

6. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals and their treatment to preserve and restore health. *Three hours a week.* Spring semester.

7. Veterinary Science.—A continuation of Course 6. *Two hours a week.* Fall semester.

8. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.* Fall and spring semester.

9. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.* Fall semester.

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Merrill; Mr. Smith

For undergraduates only

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source, nature, and assimilation of plant food; the composition of the animal body and of food materials; the adaptation of food to the animal requirements; the chemical changes involved in the digestion and assimilation of foods; respiration; absorption and liberation of energy; general metabolism; the chemical processes and methods of investigation by which these subjects are studied. Open to students who have completed Chemistry 6. *Five hours a week.* Fall semester.

2. Laboratory Biological Chemistry.—A study of the carbohydrates, fats, and protein bodies; the digestive enzymes; the blood, muscle, bones, and other tissues of the body; milk, bile, and other secretions. A continuation of the preceding course. † *Six hours a week.* Spring semester.

3. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; the fixation of atmospheric nitrogen; the composition of insecticides and fungicides; the chemistry of milk or other dairy products. Open to students who have completed Course 1. *Two hours a week.* Spring semester.

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter, and other dairy products. The course is designed for students desiring to take up experiment station and inspection work. Open to students who have completed the courses, Chemistry 1, 2, 3, 4, 7, 8, 14, 15, and 16. † *Ten hours a week.* Spring semester.

5. Geology.—A study of the earth's history and development, with especial attention to dynamical, structural, and physiographical geology. *Three hours a week.* Fall semester.

6. Economic Geology.—A course in applied geology, including a general survey of our mineral resources, with special reference to the mineral fuels; the distribution and manner of occurrence of the more useful metals; the economically important non-metallic minerals; and a study of the rocks and their uses as building stone, as road material, and as sources of lime and cement. *Two hours a week.* Fall semester.

BIOLOGY

The courses in this department are described under the College of Arts and Sciences

FARM MANAGEMENT AND AGRICULTURAL ENGINEERING

Professor Simmons

For graduates and undergraduates except Course 4 which is for undergraduates only

1. Farm Management.—A study of the various types of farming, with comparison of investment and returns for each. A study will be made of the conditions under which extensive, intensive, and mixed systems of farming prosper or fail; laying out of fields and rotation of crops; investigation of cost of different farming operations; management of men and teams; markets and marketing. Farm surveys with a detailed study of the conditions on different farms will be made. Farm plans will be outlined to suit various conditions. Lectures and recitations, *two hours a week;* laboratory, * *three hours a week.* Spring semester.

2. Agricultural Engineering and Rural Architecture.—(a) *Agricultural Engineering.* Farm surveying and leveling; the plotting of farms and the measurement of land; a study of drainage; estimating the investment and returns from a system of drainage; the making of roads; road material.

(b) *Rural Architecture.* The planning, designing, location, and construction of farm buildings, water systems, sewerage, concrete construction. Lectures and recitations, *two hours a week;* laboratory, * *three hours a week.* Fall semester.

3. History and Economics of Agriculture.—(a) *History of Agriculture.* A history of agriculture from early times to the present day; the beginning of British agriculture, and the development of modern agriculture; the agriculture of the United States, its influence on social conditions; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the evolution of farm machinery; progresss in agricultural education. Lectures supplemented by illustrative material and lantern slides.

(b) *Economics.* The factors of agricultural production, and their economic properties; organization of the farm; rent of farm land; the law of diminishing returns from the land; system of distribution; co-

operative organizations; a study of life in the rural communities; schools and other rural organizations. Lectures and recitations, *two hours a week;* laboratory, *two hours a week.* Fall semester.

4. Farm Accounting.—(a) *Farm Mathematics.* Instruction in this subject consists in the application of its principles to all kinds of farm problems where measurements of material, extension, capacity, etc., are required.

(b) *Farm Records and Accounts.* A system of records of the various operations of the farm, such as records of field labor, milk production in the dairy, crop yields, etc.; a system of accounts showing the receipts and expenditures on the farm. *Four hours a week.* Spring semester.

5. Farm Mechanics and Farm Machinery.—(a) *Farm Mechanics.* A study of the simpler laws of mechanics as applied to farm implements and farm machinery.

(b) *Farm Machinery.* A study of machinery used on the farm, farm power, etc. Demonstrations and tests are made with various machines and implements. Lectures and recitations, *two hours a week;* laboratory, * *three hours a week.* Spring semester.

FORESTRY

Professor Briscoe; Mr. Eaton

The courses in Forest Botany and Forest Zoölogy are listed under Biology, and all courses other than technical forestry under the departments in which the work is given.

1. General Forestry.—The importance and scope of the subject; forests as soil formers, soil fixers, and soil improvers; relation of forests to the health of the community; relation to state and national government; influence of forests on floods and droughts; geographical distribution of forests. Open to all male students. *Two hours a week.* Spring semester.

2. Forest Policy.—National and state forest policy and administration; relation of corporations and private owners in regard to forest

policies; applied forest management. *Two hours a week.* Spring semester. Open to major students only.

3. Forest Mapping.—Making type and topographical maps; using data of valuation survey and also traverse board; practical work in computing aneroid readings for elevation; timber estimates for valuation survey. * *Six hours a week.* Second half spring semester. Courses 10 and 11 prerequisite.

4. History of Forestry.—The development of forestry in European countries and the United States. Fernow's History of Forestry (revised edition 1911) is used as a text. *Two hours a week.* First half fall semester.

5. Forest Products.—Dealing with forest products other than logs and lumber, such as pulp wood, veneer wood, shingles and lath, tight and slack cooperage, hoops and headings, excelsior, vehicle woods for spokes and hubs, box boards, turpentine, tannin, gums, syrups, dye woods, and charcoal; methods of utilization, markets, and values. *Two hours a week.* Second half fall semester.

6. Silviculture.—A study of the facts which concern forest growth and the relation of the tree to external influence; the forest as a whole; characteristics of the forest, and of the forest regions of the United States; systems of forest reproduction; methods of tending and cultivating the forest. Open to students who have completed Biology 10, 11, and 17. *Two hours a week.* Fall semester.

7. Silviculture.—A continuation of course 6. To be taken in connection with course 9 as field work. *Two hours a week.* Spring semester.

8. Silviculture Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 or more acres of land in the vicinity of the University. A report accompanies the map describing the condition of the tract and the types of forest growth in detail. To be taken in connection with course 6. * *Six hours a week.* Fall semester.

9. Silviculture Field Work.—Practice in thinning and planting, practical tests of the germinating quality of tree seeds and a study of

seedlings. The student is required to prepare a map and planting plan of an assigned tract. To be taken in connection with course 7. **Six hours a week.* Spring semester.

10. Forest Mensuration.—Instruction in the theory of forest measurements. Lectures and recitations. Graves's Mensuration is the textbook. Calculations and computations from data obtained in field work; construction of tables of growth, volume, and yield. *Two hours a week.* Fall semester.

10a. Forest Mensuration Field Work.—Use of various instruments used in forest practice, determining the contents of standing and felled trees and the volume of stands; study of the use of American log scales and rules; consideration of the various methods and systems of measurement used in the United States; studies of the rate of growth of trees in diameter, height, and volume; growth and increment of stand. **Six hours a week.* Fall semester.

11. Forest Mensuration.—A continuation of course 10. *Two hours a week.* First nine weeks. Spring semester.

11a. Forest Mensuration Field Work.—A continuation of course 10a. **Six hours a week.* First nine weeks. Spring semester.

12. Lumbering.—The industry considered from the economic standpoint; an account of the methods of lumbering in the different regions of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and to prepare a written report on the operation of lumbering in that locality. Two-fifths credit is allowed for the time spent in the lumber woods and in preparing the report. Required of all major students. *Two hours a week.* First half of fall semester in addition to time spent in camp.

13. Valuation and Regulation.—Economic and business principles underlying the management of forest products. The application of mensuration to the management of forests; principles and preparation of working plans; the normal forest; methods of obtaining sustained yields and continuous revenue. *Two hours a week.* First half of spring semester.

14. Forest Management.—Applied systems of silvicultural management are considered in relation to all the commercially important species and types of forest in the United States. Critical discussion of management practiced on forest tracts in various regions; comparison with European system; the work now being done in this country; practical problems to work out in the field. *Two hours a week.* Laboratory work additional. Spring semester.

15. Wood Indentification.—The identification and classification of the economic woods of the United States based on inspection and simple lens laboratory work; distinguishing by means of structure, color, gloss, grain, texture, weight, density, odor, resonance, and taste; abnormal structures and defects in the woods; occurrence of various species and their uses in the arts and trades. *One hour a week,* lecture; *one hour a week,* laboratory. Spring semester.

16. Thesis.—The preparation of a thesis setting forth some original work or investigation on the part of the student along the lines of Forestry. Throughout the senior year. *Two hours a week,* fall semester. *Three hours a week,* spring semester.

17. Wood Preservation.—The structural, physical, and chemical properties of wood, particularly with relation to durability; the seasoning of wood; relation of moisture content to decay; the theory of impregnating wood; commercial methods of preservation; fire-proofing. *One hour a week.* Fall semester.

18. Forest Economics.—The influence of forests on climate, on conservation and distribution of water, on soils, topography, and public health; relation of forestry to agriculture, mining, stock raising, manufacturing, railroads, and other industries. Character and extent of our natural forest resources; importance of the conservation of these resources. The text-book is Fernow's Economics of Forestry. *Two hours a week.* Second half fall semester.

19. Forest Protection.—Systems of fire protection practiced by the Federal government, state governments, and individuals or associations; protection against atmospheric agencies; against insect damages; against grazing and browsing animals; against parasitic plants and weeds. *One hour a week.* Fall semester.

HOME ECONOMICS

Assistant Professor Palmer; Miss Beach; Miss Randall

For undergraduates only

1. Cookery.—Lectures, recitations and laboratory practice. This course provides instruction in the general principles controlling the preparation of food with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Lecture, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

2. Cookery.—Continuation of course 1. The serving of simple meals with the study of dining room equipment and rules of table service are included in this course, as well as instruction in marketing and general household accounts. It is the aim of this course to familarize the student with the business side of housekeeping. Open to students who have completed Course 1. Lecture, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

3. Dietetics.—A general review of the principles of cookery with direct reference to diet. Special emphasis is placed upon diet for children both in health and disease. Open to students who have completed Courses 1 and 2. Lecture, *two hours a week;* laboratory, † *two hours a week.* Fall semester.

4. Dietetics.—Continuation of Course 3. Consideration of food for the sick and convalescent with a study of special diets. Open to students who have completed Course 3. Lecture, *two hours a week;* laboratory, †*two hours a week.* Spring semester.

5. Advanced Cookery.—A return to general cookery is made through work in large quantities and the preparation and serving of meals. Canning and preserving are taken up and demonstrations given by the students. Open to students who have completed Course 4. Lecture, *one hour a week;* laboratory, † *three hours a week.* Fall semester.

6. Fancy Cookery and Field Work.—The preparation, garnishing, and decorating of the more elaborate dishes are taken up as well as the preparation and serving of a formal dinner. Wholesale and retail

markets, factories, mills, and dairies are visited as opportunity offers. Open to students who have completed Courses 1 and 2. † *Three hours a week.* Spring semester.

7. Advanced Cookery.—This course embraces the principles of Course 5, and is required of students in the two years course. Prerequisites, Courses 1 and 2. Lecture, *one hour a week;* laboratory, † *four hours a week.* Fall semester.

8. Dietetics.—This course embraces the principles of Courses 3 and 4, and is required of students in the two years course. Prerequisite, Course 7. Lecture, *one hour a week;* laboratory, † *four hours a week.* Spring semester.

8a. Camp Cookery.—Designed especially for men in the Forestry Department. Open to any students except freshmen. Class limited to 18. The general principles of cookery are taken up by means of laboratory practice, with especial emphasis upon preparation of foods suitable for camp life. † *Two hours a week.* Spring semester.

9. Plain Sewing.—The fundamental principles of hand and machine sewing are taught in connection with the making of undergarments, towels, napkins, etc. † *Four hours a week.* Fall semester.

10. Advanced Sewing.—Pattern drafting and adjustment. Dressmaking. Continuation of Course 9. † *Four hours a week.* Spring semester.

11. Fine Sewing.—Fine hand and machine work, hemstitching, and simple embroidery. Courses 9 and 10 are prerequisites. † *Four hours a week.* Fall semester.

12. Handwork.—Basketry and weaving. † *Four hours a week.* Fall semester.

13. Handwork.—Knot and string work. Knitting and crocheting. † *Four hours a week.* Spring semester.

14. Advanced Handwork.—Continuation of Courses 12 and 13. † *Four hours a week.* Spring semester.

15. Art.—A study of line, mass, and color with practical applications. Lecture, *one hour a week;* laboratory, † *three hours a week.* Fall semester.

16. Art.—Continuation of course 15. Emphasis is placed upon design. Lecture, *one hour a week;* laboratory, † *three hours a week.* Spring semester.

17. Construction.—A study of the house and plans for its construction. Laboratory work in designing and executing ground floor plans for a modest home and plans for kitchen laboratories. Special attention given to details. Lecture, *one hour a week;* laboratory, † *two hours a week.* Fall semester.

18. House Furnishing and Decoration.—Study of textiles, source, nature, preparation, use, etc., and a study of color schemes especially, adapted to use in house decoration. The special problem of decoration for the house planned in Course 17 is taken up and the color schemes worked out in actual materials. Course 17 is a prerequisite. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

19. Household Economics.—Lectures, recitations, and practice. The principles of housework are examined, methods are studied, and practical applications are made. Lecture, *one hour a week;* laboratory, †*one hour a week.* Fall semester.

20. Laundering.—Principles and processes studied and practiced. Selection and care of equipment for both home and school work. Removal of stains, bluing, softening of water, soap making. Lecture, *one hour a week;* laboratory, † *two hours a week.* Spring semester.

21. Practical Housework.—A course affording opportunity for the student to show her power in managing a household and serving luncheons to twelve or more people in a specified time, and with a limited amount of money. Time to be arranged. *Two hours* credit *a week.* One semester. Senior year.

22. Home Nursing.—Consideration of the sick room and its appointment, emergencies, contagious diseases, bandaging, general care of the patient. *One hour a week.* Spring semester.

23. Seminar.—General discussion of articles relating to home economics appearing in the magazines. An effort is made to keep in touch with the literature of the subject, and be conversant with recent methods and developments. *One hour a week.* Spring semester.

24. Methods.—The particular methods applicable to teaching home economics are investigated. An effort is made to discover the means whereby a wholesome atmosphere may be secured in the class room, and how the independence and self-confidence of the pupils may be fostered. Courses of study are considered and outlined. *One hour a week.* Fall semester.

25. Practice Teaching.—Required of students in the senior year, and done under supervision. *Two hours* credit.

26. Thesis.—A thesis on a subject relating to home economics showing independent work is required of all students taking the four years course. Equivalent to *three hours a week* one semester. Senior year.

HORTICULTURE

Professor Brown; Associate Professor Hitchings

For undergraduates only

1. Practical Pomology.—A study of orchard sites and soils, methods of setting, cultivating, fertilizing, pruning, and spraying. Class room, *two hours a week*; laboratory, * *three hours a week.* Spring semester.

2. Commercial Pomology.—A course in methods of picking, grading, packing, storing, and marketing fruit. The laboratory work of this course will acquaint the student with the more important varieties of fruit in this State. Class room, *two hours a week;* laboratory, *two hours a week.* Fall semester.

3. Systematic Pomology.—A systematic study of the types and varieties of the leading groups of fruits, their evolution and adaptation to environment. Also distribution of varieties in the State. Open to students who have taken Courses 1 and 2. *Two hours a week* in class room and † *two hours a week* in the laboratory. Fall semester.

4. Vegetable Gardening.—A course in practical vegetable gardening; grading, marketing and storing of vegetables, including the systematic study of varieties and types for home and commercial use. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Fall semester.

5. Small Fruit Culture.—A study of the bush and vine fruits, including strawberries; adapted varieties, with culture, picking, grading, packing, and marketing—home and commercial. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Spring semester.

6. Greenhouse Management and Construction.—A study of the different greenhouse crops, supplemented by practice in the regular greenhouse operations and including a study of the principles of greenhouse construction and heating. *Two hours a week* in the class room and † *two hours a week* in the greenhouse. Spring semester.

7. Plant Breeding.—A course in plant breeding as applied to variation, selection, and hybridization as adapted to garden and fruit crops. *Two hours a week.* Spring semester.

8. Landscape Gardening.—A study of the principles of landscape art and of the materials used in making landscape pictures. Special attention is given to the improvement of the home grounds. *Two hours a week* in the class room and † *two hours a week* in the laboratory. Fall semester.

10. Thesis.—Students specializing in Horticulture are required to prepare a thesis on some subject pertaining to Horticulture. *Three hours a week.* Fall and spring semester.

11. Floriculture.—A course in the culture, management, and care of flowers for home and commercial purposes. Class room, *two hours a week; two hours a week, laboratory.* Fall semester. Elective for juniors and seniors.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 233

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 234

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

JAMES STACY STEVENS, M. S., LL. D. *Professor of Physics*
DEAN
MERRITT CALDWELL FERNALD, PH. D., LL. D.
Emeritus Professor of Philosophy
LUCIUS HERBERT MERRILL, SC. D.
Professor of Biological Chemistry
JAMES NORRIS HART, C E., M. S., SC. D.
Professor of Mathematics and Astronomy
JOHN HOMER HUDDILSTON, PH. D.
Professor of Greek and Classical Archaeology
JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages
GEORGE DAVIS CHASE, PH. D. *Professor of Latin*
CAROLINE COLVIN, PH. D. *Professor of History*
WALLACE CRAIG, PH. D. *Professor of Philosophy*
ROLAND PALMER GRAY, M. A. *Professor of English*
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*
GUY ANDREW THOMPSON, PH. D. *Professor of English Literature*
WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology.*
ARTHUR JULIUS JONES, PH. D. *Professor of Education*
GEORGE WARE STEPHENS, PH. D.
Professor of Economics and Sociology
JOHN ROTHWELL SLATER, PH. D.
Professor of English (Summer Term)
JOHN HEDMAN, PH. D. *Professor of French (Summer Term)*

CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Associate Professor of Romance Languages
LEON ELMER WOODMAN, PH. D. *Associate Professor of Physics*
HARLEY RICHARD WILLARD, PH. D.
Associate Professor of Mathematics
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
ALICE MIDDLETON BORING, PH. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
LLOYD MEEKS BURGHART, M. A.
Assistant Professor of Chemistry
ROBERT RUTHERFORD DRUMMOND, PH. D.
Assistant Professor of German
*LOWELL JACOB REED, M. S. *Instructor in Mathematics*
ALBERT GUY DURGIN, M. S. *Instructor in Chemistry*
WALTER EDMOND WILBUR, M. S. *Instructor in Mathematics*
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
HOWARD MADISON PARSHLEY, A. M. *Instructor in Zoölogy*
HENRY ROBBINS BARROWS, A. B. *Instructor in Biology*
JOHN HARRY PARRY, A. B. *Instructor in English*
LEROY FRANKLIN BLISS, A. B. *Instructor in English*
RAYMOND HARMON ASHLEY, PH. D. *Instructor in Chemistry*
HERBERT SOLEY BAIN, A. B. *Instructor in German*
DAVID LEE CLARK, A. M. *Instructor in English*
RALPH MAYNARD HOLMES, A. M. *Instructor in Physics*
MARTIN ANDREW NORDGAARD, A. B.
Instructor in Mathematics
FRANK PRENTICE RAND, A. B. *Instructor in English*
CHARLES EDWARD ROCHE *Instructor in Romance Languages*
JOSEPH SPEAR, A. B. *Instructor in Mathematics and German*
JAMES NEWELL STEPHENSON, M. S. *Instructor in Chemistry*
VINCENT MILO TRANSUE, M. S. *Instructor in Physics*
ROBERT CALVIN WHITFORD, A. M. *Instructor in English*
ANTOINETTE TREAT WEBB, A. B. *Assistant in English*

* Absent on leave from Sept. 1, 1912, to Sept. 1, 1913.

GENERAL INFORMATION

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

1. Men and women who desire to pursue a cultural college course.

2. Men and women who desire to enter professional schools which require a collegiate degree.

3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 50-66. They are practically the same as for other New England colleges and may be met by a four years preparatory course in a good high school or academy.

FRESHMAN STUDIES

The character of the work of the first year is conditional somewhat upon the subjects offered for admission.

It is recommended that all students in this College register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR SUBJECT

Each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work: Biology (including Zoölogy, Botany, Physiology, and Entomology), Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archæology, History, Latin, Mathematics and Astronomy, Philosophy, Physics, Romance Languages (including Spanish and Italian).

In many cases the selection of a major subject need not be made before the beginning of the sophomore year. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this must be made up from such other related departments as the professor under whose direction the major subject is taken may prescribe. The remainder of the student's work may be selected from any department or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his major instructor, and during the remainder of the course this instructor acts as chief adviser in all matters relating to the curriculum, and is representative of the student before the Faculty.

BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The curricula demand a 25 credits course and are regularly completed in four years; but a student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years on their college course.

No outline of the curricula in the College of Arts and Sciences is given in the catalog, but students may have such an outline presented to them by applying to the professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology. To meet the needs of students desiring a year of college work for admission to a medical school, a schedule of subjects has been outlined. These include: Biology 1; Chemistry 1, 2, 3, 4; English 4, 5; French or German 3a, 3b; Military Science 1; Physics 4, 5.

BACHELOR OF PEDAGOGY CURRICULA

Graduates of the Maine normal schools who have completed a course in a Class A high school, and who have had one year of successful experience in teaching, are admitted to the University as candidates for

the degree of Bachelor of Pedagogy. Such students are required to complete seventy-five semester hours, of which twelve shall be in the department of Education, and a sufficient number of the remaining hours shall be devoted to some one department to give them a satisfactory equipment for high school teaching.

CURRICULUM IN JOURNALISM

The University has recently established a curriculum in journalism, which extends over four years and includes the following subjects:

Freshman year, English 3 and 4; French, or German, or Spanish, 3 or 5 hours; Science—Physics, or Chemistry, or Biology, 3 or 5 hours; Economics 8, American Government, Economics 1a, Political Economy; English 6, and 7, 18th and 19th Century Prose; Bibliography 1; Philosophy 5, Logic; Military and Physical Training. Sophomore year. Economics 3a, Sociology, and 4a, Social Reforms, alternating with 7b Municipal Government; English 8a and 8b, History of English Literature; History 3 and 4, English History, alternating with History 1 and 2; Science 3 hours; English 15, Victorian Literature; Military and Physical Training. Junior year, Economics 1b, Advanced Political Economy; Economics 9, Democracy; History 6 and 7, History of the United States; English 11a and 11b, History of American Literature; English 10a and 10b, Shakespeare, or History of the English Drama; English 32, Journalism; Elective, Science, or Language, or Philosophy, or Art, 3 hours. Senior year, Economics 2b, Public Finance, Economics 5, International Law, Economics 6, Business Law; English 13, Specialized Writing; History 5b, Recent History; English 35, Literary Criticism; English 33 Journalism; Elective, Language, or Philosophy, or History of Education, or Art, 5 hours.

Students who complete this curriculum will receive the Bachelor of Arts degree for major work in English.

GRADUATE CURRICULA

A candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degrees.

No work done before the conferring of the bachelor's degree may be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study shall be submitted to and approved by the committee on advanced degrees.

The course of study shall consist of work in one major department or subject in which the candidate has already pursued undergradaute study for at least two years, and work in not more than two minor subjects bearing a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject.

GENERAL LECTURE COURSE

A course of weekly lectures is given in the College of Arts and Sciences each semester. Attendance is open to all and credit is granted to such students as meet the conditions imposed. During the present year, the lectures will be in charge of the departments of Greek and Classical Archæology and Latin in the fall semester, and the department of Chemistry in the spring semester.

UNIVERSITY EXTENSION AND LECTURE COURSES

Professors in the College of Arts and Sciences and the College of Technology offer certain lectures and groups of lectures on subjects covered by their departments.

The extension work has a threefold classification: A, single lectures; B, short courses, consisting of a series of about five lectures; and C, courses of study, fully equivalent in scope and method to work receiving two hours credit in the University. The classes will meet for two consecutive periods (one hour and forty minutes) for instance, on

Friday or Saturday afternoons or evenings for fifteen weeks. The courses will include lectures, discussions, and final examinations. For the present year, the work will, for the most part, be confined to the A and B groups.

GENERAL LANGUAGE

PROFESSOR GEORGE D. CHASE

A. Single Lectures:

1. Thucydides the Father of History
2. The Sacred Vedas of India
3. Slavic Folk Songs
4. American Dialects
5. Spelling Reform
6. English Surnames

B. Short Courses:

1. Language
    a. Origin and Groups of Language
    b. Development of Forms of Words
    c. Developments of Meaning of Words
    d. Changes in Vocabulary. Loss and addition of words
2. The Indo-European Languages
    a. Related Languages
    b. The Indo-European Group
    c. The Original Home of the Indo-European Group

ROMANCE LANGUAGES AND LITERATURES

PROFESSOR J. B. SEGALL

A. Single Lectures:

1. Victor Hugo
2. Balzac
3. The Literary Salons in France
4. Cervantes: Don Quixote
5. Voltaire
6. Rosseau

B. Short Courses:

1. Moliere, five lectures
2. Ibsen, five lectures

A. Single Lectures:

Associate Professor A. P. Raggio

1. Simplified Spelling and its Relation to Phonetic Writing
2. Readings in Dante. Selected passages, each passage being read in English, French, German, Spanish, and Italian in the order named. The translations selected will in each case be in verse

B. Short Courses:

1. The Modern Italian; his Achievements in the Field of Literature, Art, and Science. Three lectures

GERMAN

Professor Garrett W. Thompson

A. Single Lectures:

1. The Germanic Language; its place in history and philosophy
2. The Introduction of Christianity into Germany
3. Charles the Great; his Work and Worth
4. The Influence of the Crusades and Chrivalry on Germanic Literature
5. Goethe's Faust; its Interpretation and Significance
6. History of the German Settlements in Maine

B. Short Courses:

1. The Eighteenth Century in Germany
   a. Lessing and Rationalism
   b. Nerder and the Storm and Stress Movement
   c. Goethe; his Life and Works as a Humanitarian
   d. Schiller; his Life and Works. Transcendentalism; Interpretation of 18th Century thought
2. The Nineteenth Century
   a. Romanticism
   b. The Young Germany Movement
   c. Modern Realism; Sudermann; Hauptmann
3. Goethe
   a. His Lesser Works
   b. Faust; its Origin and Meaning
   c. Relations of Goethe and Schiller

ENGLISH LANGUAGE AND LITERATURE

Professor Roland P. Gray

A. Single Lectures:

1. English Usage. This lecture explains the ultimate authority in the use of English, and discusses correct and incorrect expressions
2. What is Literature?
3. Elizabethan London, with special reference to the theatre. Illustrated by stereopticon
4. Browning's Abt Vogler
   (Appropriate for Sunday evening address as well as for other occasions.)
5. Béowulf, the oldest English Epic. Illustrated by stereopticon and readings from the lecturer's translation of the Anglo-Saxon Poem

B. Short Courses:

1. William Shakespeare, his Life and Dramatic Art
   a. Shakespeare's Life in Stratford and in London. Illustrated by nearly 100 slides
   b. Love's Labor's Lost, Early Comedy
   c. Romeo and Juliet, Early Tragedy. Illustrated
   d. Twelfth Night, Mature Comedy. Illustrated
   e. King Lear, Mature Tragedy. Illustrated

C. Courses of Study:

26a. History of the English Drama. Lectures and reading of Mystery and Morality Plays, Interludes, Masques, Early Drama, and some of Shakespeare's Predecessors

26b. This course continues 26a. Open only to those who have had 26a. These half courses may be taken in successive years

Professor G. A. Thompson

A. Single Lectures:

1. The Ballad, the Poetry of the People
2. Byron, a Poet of Democracy

GREEK AND CLASSICAL ARCHAEOLOGY

Professor J. H. Huddilston

B. Short Courses:

ART IDEALS AMONG THE GREAT NATIONS

A course of ten lectures; illustrated with photographs

1. Egyptian and Oriental Art—The Art of Realism
2. Greek Art; The Rise of Idealism
3. Masterpieces of Greek Art
4. Roman Art and Art on Roman Soil
5. Architecture and Sculpture in the Middle Ages
6. The Relation of Painting to the Life of the 13th and 14th Centuries
7. The High Renaissance in Italy
8. French Art in the 17th and 18th Centuries
9. Painting in the Netherlands and Germany in the 16th to 18th Centuries
10. Art in Spain and Spanish Art

Professor Caroline Colvin

A. Single Lectures:

1. The Christian and the Moslem in Europe
2. The Economic Evolution of Woman
3. The New Emphasis of State History and Government
4. The Great Movements of European History Since 1815

EDUCATION

Professor A. J. Jones

A. Single Lectures:

1. Agricultural Education; its Place and Purpose in the Public School
2. Are Our Schools Growing Better?
3. Children's Interests
4. The Community and the School

5. The Liberal Education of the Future
6. The Nature of the Child
7. The Need for a More Definite Training of the Emotional Life of the Child
8. The Place and Purpose of the Sunday School in Modern Education
9. The Problem of the Sunday School Teacher
10. The Boy and the Sunday School

B. Short Courses:

1. Motives in School Work. Series of three; may be given as single lectures
2. See C No. 2

C. Courses of Study:

1. Principles of Education. A course dealing with some of the fundamental principles underlying education
2. Educational Classics, a critical study of the chief works of Comenius, Rousseau, Pestalozzi, and Spencer

Each of these classics may be taken by itself in a short course of three to five lectures

THE LIBRARY

PROFESSOR R. K. JONES

A. Single Lectures:

1. The Library and its Relation to the Community
2. The School Library, its Purpose and its Administration

PHILOSOPHY

PROFESSOR WALLACE CRAIG

A. Single Lectures:

1. The Experimental Study of Animal Intelligence
2. The Evolution of Social Life among Animals
3. The Philosophy of Evolution
4. The Biological and Psychological Foundations of Art
5. Social Psychology and the Problems of Indivdualism vs. Collectivism

ECONOMICS AND SOCIOLOGY

Professor George W. Stephens

A. Single Lectures:

1. Responsibilities of Citizenship
2. Women in Industry
3. Problems in Taxation
4. The Problem of the City
5. Co-ordination of Economic Factors in Agriculture
6. The Social Significance of Play

B. Short Courses:

1. The Trust Question
    a. The Handicraft Stage of Industry
    b. The Industrial Revolution
    c. Competition, its Nature and Limits
    d. Combination, its Causes and Forms
    e. Public Utilities, their Relation to the State
    f. Control of Trusts
2. Socialism and Social Reform
    a. Communism before the French Revolution
    b. Utopian Socialism
    c. Scientific Socialism
    d. The Economic Interpretation of History and the Class Struggle
    e. The Theory of Surplus Value and of Crises
    f. The Present Socialist Program
    g. Socialism vs. Social Reform

BIOLOGY

Professor M. A. Chrysler

A. Single Lectures:

1. The Cedars of Our Great West, illustrated with the stereopticon
2. North American Deserts, illustrated with the stereopticon
3. What is the Food of Plants?
4. Boarders and Lodgers in the Plant World, illustrated with the stereopticon

CHEMISTRY

Associate Professor Charles W. Easley

A. Single Lectures:

1. Our Atmosphere
2. Achievements in Science
3. The Pure Food Law and its Service to the People
4. Waste, its Utilization
5. Recent Developments in Science
6. The Health of our School Children—Air, Food and Exercise
7. The Soil and Air in relation to the Product of Food
8. Is there a Limit of Population?

PHYSICS

Professor James S. Stevens

A. Single Lectures:

1. Fads and Fancies in Science. This lecture will discuss some of the curiosities of science, such as squaring the circle, perpetual motion, and the fourth dimension
2. Modern Meteorology and Weather Predictions
3. Ancient and Modern Theories of Matter
4. Metrology. A sketch of the theory of measurements

B. Short Courses:

1. A course of five lectures on the Theories of Matter
   Considerable attention will be given to a discussion of radio-activity, X-rays, and wireless telegraphy
2. The History of Physics. Five Lectures

MATHEMATICS

Professor James N. Hart

A. Single Lectures:

1. The Sun and his Subjects
2. Other Worlds than Ours
3. Other Suns than Ours
4. Eclipses
5. Comets and Meteors
6. The Solar System, illustrated with the stereopticon

PHYSICAL CULTURE

Professor Edgar R. Wingard

A. Single Lectures:

1. The Relation of Physical Education to the High School
2. Athletics and the Man

B. Short Courses:

1. Practical Hygiene

CIVIL ENGINEERING

Professor Harold S. Boardman

1. Engineering Education and Opportunities of the Engineer
2. Conservation of the Water Resources of the State of Maine
3. Irrigation in the West, illustrated with the stereopticon
4. The Great Break of the Colorado River into the Imperial Valley in Southern California, illustrated with the stereopticon

Assistant Professor Julius E. Kaulfuss

1. The Road Situation in the United States and especially in Maine
2. Good Roads. What are they Worth? Illustrated with the stereopticon
3. Our Country Roads, illustrated with the stereopticon
4. The Selection of Pavement for City Streets, illustrated with the stereopticon

ELECTRICAL ENGINEERING

Professor William E. Barrows

1. The Part which Electricity Plays in the Business World
2. Electricity in the Home
3. Electricity on the Farm
4. Lighting of Residences, Stores, and Streets
5. The Various Uses of Electricity
6. The History of Electric Lighting and its Present Status
7. Electrical Possibilities in Maine .

MECHANICAL ENGINEERING

PROFESSOR ARTHUR C. JEWETT

1. Industrial Safeguards and Accident Preventions
2. The Gasoline Engine on the Farm
3. Gas Power

DEPARTMENTS OF INSTRUCTION

NOTE:—A star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek

ASTRONOMY

Courses in astronomy are described under the department of Mathematics

BIBLIOGRAPHY

PROFESSOR R. K. JONES

1. BIBLIOGRAPHY.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbinding and the care of books; library processes and aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.* Spring semester.

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen. Fall semester.

BIOLOGICAL CHEMISTRY

The courses in this department are described under the College of Agriculture

BIOLOGY

Professor Chrysler; Associate Professor Boring; Assistant Professor Conser; Mr. Parshley; Mr. Barrows

The course in general biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

For undergraduates only

1. General Biology.—This course is designed to be part of the education of any college student and is open to all candidates for the arts degree, as well as to more special students. It is regarded as essential for all students in the College of Agriculture, including those taking the Forestry and Home Economics curricula as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further work in either zoölogy or botany. In the laboratory each student studies with the microscope, or dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily. Class-room, *three hours a week;* laboratory, † *four hours a week.* Throughout the year.

19. Sanitary Science.—Attention is given to the conditions that influence individual and public health. This includes the nature of diseases, their transmission and control, and laws of personal and community sanitation that are often violated and should be understood. Open to any woman student who has taken general biology. *Two hours a week.* Spring semester.

8. Entomology.—This course opens with the study of the anatomy and development of insects, after which typical species of the orders are studied with reference to their structure, habits, life-histories, and

adaptations. Especial attention is given to the economic problems. General biology is required as a preparation. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

13. Elementary Botany.—Chiefly a study of the structure and functions of the organs of the higher plants, together with some consideration of the cryptogams, and the principles of botanical classification. Required of two years Pharmacy students. Class-room *one hour a week;* laboratory, † *four hours a week.* Spring semester.

14. Pharmaceutical Histology.—A training in the fundamental methods involved in plant histology. Officinal crude drugs furnish a considerable portion of the illustrative material. Open to students who have taken elementary botany. Class-room *one hour a week;* laboratory, † *four hours a week.* Fall semester.

For graduates and undergraduates

18. Principles of Breeding.—A general review of the facts that form the basis of our knowledge of inheritance. General biology is required as a preparation for this course. *Two hours a week.* Fall semester.

2. Vertebrate Anatomy.—Types of the Vertebrata are studied and their structure compared. Careful dissections are made of representatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by general biology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

3.—Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and organs and the methods of preparing them for microscopic study, students thus becoming familiar with hardening, embedding, sectioning, staining, and mounting. Vertebrate anatomy is required as a preparation for this course. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester of odd years.

5. Animal Physiology.—Intended for those who already have an elementary knowledge of general biology and physiology. The course deals with the functions of the organs of the body and is accompanied

by laboratory work to illustrate their activities. It should be preceded by vertebrate anatomy. Class-room, *Two hours a week;* laboratory, † *four hours a week.* Fall semester of even years.

6. Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes lectures on the comparative embryology of vertebrates; and laboratory work on the fish, frog, and chick. Vertebrate anatomy is required as a preparation. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

10. Plant Histology.—The microscopic structure of the higher plants; the various tissues; the root, stem, leaf, and spore-bearing organs; the adaptations of plants to external conditions, considered from the standpoint of structure; killing, sectioning, staining, and mounting of plant tissues. This course must be preceded by general biology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Fall semester.

11. Plant Physiology.—The plant is considered from the standpoints of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth, movement in response to stimuli. This course must be preceded by general biology, and should follow plant histology. Class-room, *two hours a week;* laboratory, † *four hours a week.* Spring semester.

15. Plant Ecology.—Presents briefly two aspects of the subject: (1) Physiographic ecology studied in the field as far as the season permits; (2) Structural ecology, viz., the histological features characteristic of plants growing in extreme habitats, and of those having special modes of nutrition. The course must be preceded by plant histology. Class-room, *one hour a week;* laboratory, † *four hours a week.* Spring semester of 1914 and alternate years.

16. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by general biology and may profitably be preceded by plant histology. Class-room, *two hours a week*; laboratory, †*two hours a week.* Spring semester of 1915 and alternate years.

17. Forest Botany.—A systematic study of the trees of North America, their silvical characters and distribution. Field work in the identification of local species, and the preparation of a forest herbarium are required in the first semester. The course includes dendrology and forest ecology. This course must be preceded by general biology. Class-room *two hours a week;* laboratory, †*four hours a week.* Throughout the year.

20. Thesis.—Students in the Colloge of Agriculture specializing in biology are required to prepare a thesis on some subject approved by the head of the department. *Three hours a week* fall semester and *three hours a week* spring semester.

21. Seminar.—Preparation and discussion of papers dealing with recent advances in zoölogy and botany. Open to seniors and graduate students. *One hour a week.* Fall and Spring semesters.

22. Wood Identification.—The identification of the various commercial woods by means of the unaided eye and the microscope. Open to students in Chemical Engineering, and to others by permission. †*Four hours a week* (counts one credit hour). Second half of fall semester.

7. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

12. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. Courses which have recently been given under this caption include: morphology of Pteridophytes; structure and technology of woods; structural and physiographic ecology; advanced plant physiology; special problems assigned to individuals. *The time varies and the work may be continued a number of semesters.* Fall and Spring semesters.

CHEMISTRY

The courses in this department are described under the College of Technology

ECONOMICS AND SOCIOLOGY

Professor Stephens; Assistant Professor Matthews

For undergraduates only

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics; production, distribution, and consumption; values, commerce, labor problems, and various other topics in this field of study. Text-book and general discussions. *Three hours a week.* Fall semester.

1b. Political Economy.—In general, similar to 1a, but abbreviated and modified to meet the need of technical and agricultural students. *Two hours a week.* Fall semester.

2a. Money and Banking.—An introductory course to the study of money, banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Text-book and lectures. *Three hours a week.* Spring semester.

2b. Money and Banking.—Essentially similar to 2a, but planned especially for students in the Colleges of Technology and Agriculture. *Two hours a week.* Spring semester.

3a. Elements of Politics.—An introductory course dealing with such subjects as the nature of the state, sovereignty, liberty of the individual, structure of government, political parties, and the province of government. *Three hours a week.* Fall semester.

3b. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life

and with which every citizen should be familiar; rights; contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week.* Spring semester.

For graduates and undergraduates

4. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. Open to all who have taken or are taking Course 1a, and to others only by special permission. *Three hours a week.* Spring semester.

5a. Sociology.—This course is devoted to a study of the principles which underlie normal social relations and processes. The application of those principles to current social phenomena will receive conisderable emphasis. First semester, *three hours a week.*

5b. Social Pathology.—A critical study of the dependent, defective and delinquent classes; causes, magnitude, methods of prevention and amelioration. Second semester, *three hours a week.*

6. Public Utilities.—In this course will be considered the economic and legal principles and problems involved in public and private ownership and regulation of municipal utilities in the United States and Europe. *Two hours a week.* Spring semester.

7a. Governments of Europe.—A brief review of the ancient types of government followed by a detailed comparative study of modern European national governments. Political parties and current national problems will receive some attention. Lecture course with readings. *Three hours a week.* Fall semester.

8. Socialism and Social Reform.—A study of the development and present trend of the socialistic movement; the single tax, profit-sharing

and co-operation; limits of private and public activity. *Three hours a week.* Spring semester.

9. Municipal Government.—A study of the system of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. *Two hours a week.* Fall semester of 1914 and alternate years.

10. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. *Three hours a week.* Spring semester.

11. Labor Problems.—A study of the evolution of organized labor, and the specific problems of present-day industry, such as trade unions, woman and child labor, immigration, employers' associations, agencies of industral peace, etc. *Two hours a week.* Fall semester of 1913 and alternate years.

14. Transportation.—The historical development of transportation in the United States; railway organization and control; methods of financing; rate-making; federal and state legislation; public regulation and ownership of railroads in leading European countries; railway commissions. *Three hours a week.* Fall semester of 1913 and alternate years.

16. Business Organization.—In this course will be considered the origin and development of the corporation; the significance of large scale production; the economic and legal aspects of business combinations; corporation finance; governmental regulation. *Three hours a week.* Fall semester of 1914 and alternate years.

18. Rural Sociology.—A study of the social factors affecting country life; the economics of farming; rural co-operative organizations; the movements for the improvement of rural life. *Two hours a week.* Fall semester of 1914 and alternate years.

21. Advanced Course on the Family.—An historical consideration of the origin and growth of the family; the legal and economic relations

of members of the family; its significance as an institution; its pathological manifestations. *Two hours a week.* Fall semester. Alternate years. (Not given in 1914-15.)

Primarily for graduates

Ec. 23. Economic Theory.—A critical study of modern theories of wealth and its distribution; the contributions to theory of the Classical, Historical and Austrian Schools. Current writers will receive considerable attention. *Two hours a week.* Spring semester of 1914 and alternate years.

25. Seminar.—In this course, provision is made for the guidance of the work of students properly qualified to engage in economic research. At the beginning of each semester, some specific topic will be selected, upon which an extended original investigation will be undertaken. Throughout the year, *two hours a week.*

Summer Term

Transportation.—The historical development of transportation in the United States; railway organization and control; methods of financing; rate-making; federal and state legislation; public regulation and ownership of railroads in leading European countries; railway commissions. This course is Economics 14 in the catalog.

Sociology.—A systematic study of normal society, its essential characteristics and processes, social institutions, the family, religious organisms, and such current social problems as divorce, poverty and its relief, criminality, and prison reform, etc. Lectures, readings, papers, and discussions.

Business Law.—The purpose of this course is to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailment, guaranty, insurance, etc. Text-book, readings, and discussions.

Every reasonable effort will be made to meet the needs of all students desiring to take work in this department. Courses not regularly announced for the Summer Term, which may be desired by a sufficient number of qualified students, will be given, so far as practicable.

EDUCATION

Professor A. J. Jones.

For undergraduates only

10. Beginning Course in Education.—An introductory course in education. A general survey of the field of education, dealing with the aims of education, the applications of psychology to education, and some of the elementary principles of method. Designed for those who are beginning the study of education, or who cannot take the more specialized courses. *Three hours a week.* Spring semester.

For graduates and undergraduates

1 and 2. History and Principles of Education.—This course is a combination of the course formerly given as History of Education with that of Principles of Education. This course will consider the principles underlying modern educational theory and practice and the historical development of our present school system, and school curriculum. The work of the year will be divided roughly into (1) a rapid survey of the history of education from the Greeks to the present time. (2) A careful study of various phases of educational theory and practice, their historical development, the principles underlying them, and their application to present conditions. Some of the topics considered will be: the school as a social institution; public support and control of education; the curriculum of the school; the place of the child in education; the teacher; interest; correlation; formal discipline. (3) An intensive study by each student of some special topic more or less directly related to the major work. This will involve outside reading, investigation, and written reports. Although credit will be given for one semester's work, it is advisable that all students registering for these courses continue throughout the year. *Three hours a week* throughout the year.

3. Organization and Administration.—Problems growing out of the establishment, support and control of schools; the part taken by different agencies in solving these problems,—the Nation, the State, and the local community; typical states studied; a comparative study of the

organization and administration of education in Prussia, France, and England. Special study of the school system of Maine. *Three hours a week.* Fall semester.

4. Organization and Administration Continued.—Problems within the State; town schools and city schools; duties of all officers; certification; teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.* Spring semester.

5. Principles of Education.—The design of the course is to set forth (1) the meaning and aims of education as related to the individual and society; (2) the relative educational value of studies and their organization into the curriculum, as indicated by the recapitulation, culture epoch, formal discipline, and other theories; and (3) the methods of teaching as determined by the mental processes involved, particularly, instinct, habit, attention, interest, apperception, induction, and deduction. *Three hours a week.* Fall semester. This course will not be given after 1913.

6. Methods of Teaching.—The general principles underlying method will be considered and the place and function of the different studies discussed. Those interested in the teaching of special subjects will be given opportunity to specialize in the methods applying to these subjects. Observation of classes in the Orono high school and the higher grammar grades will constitute a regular part of this course. *Three hours a week.* Spring semester.

13. The Secondary School.—The development of our present system of secondary schools; the function of the secondary school, its relationhsip to the elementary school, to the college, and to the social state; the course of study; the equipment; secondary school activities; organization and management of the secondary school; the adolescent. Prerequisite Education 1 and 2. *Three hours a week.* Spring semester.

11a and 12a. Practice Course.—The arrangement for practice work in the Orono high school made for the year 1912-1913, will be continued

for the present year. Careful supervision of the work will be made by the Professor in charge and by the Principal of the high school. Students who take this course will teach five periods a week for a half year. Four hours credit will be given. Prerequisite one semester's work in education.

11b. Class Management.—General conduct of classes; art of questioning; oral and written tests; systems of marking; observation of classes. Required of all taking practice work. *One hour a week.* Fall semester.

Primarily for graduates

9. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory to our public schools. Various problems will be investigated. *Two hours a week.* Fall semester.

Summer Term

10s. A Brief Course in Education.—This course deals with the aims of education, the applications of psychology to education, and some of the principles of underlying methods. It is designed both as an introduction to the more detailed study of education and as a brief course for those who wish to secure a general view of the field of education.

8s. The Secondary School.—The development of our present system of secondary schools; the function of the secondary school, its relationship to the elementary school, to the college, and to the social state; the course of study; the equipment; secondary school activities; organization and management of the secondary school. Open only to those who have had adequate courses in the history of education and the principles of education and to teachers of experience.

14s. School Problems.—This course is especially designed for principals and superintendents and any others who wish to make an intensive study of problems of school administration and school supervision. The topics discussed will depend on the needs of the class. The following topics are suggested: grading and promotion of pupils; the

course of study; supervision; school finances; consolidation; reorganization of the high school; school programs; fatigue and school programs; one session or two; class management.

Graduate Courses.—One course will be offered each summer for those who wish to undertake work toward an advanced degree. For the Summer Term of 1913 Course 8s is the specific one offered, but it may be possible to arrange other courses for any who have had adequate preparation and who wish to pursue a special line of work.

In addition to the regular courses, opportunity will be given for the investigation of special problems in education. Teachers, whether working for credit or not, will be given the advice and help necessary for such investigation. If teachers who wish to do work of this kind will consult with the instructor some weeks in advance, arrangements may be made by which special material for the study may be collected.

ENGLISH

Professor Gray; Professor G. A. Thompson; Professor Daggett; Mr. Parry; Mr. Bliss; Mr. Whitford; Mr. Clark; Mr. Rand; Miss Webb

Eight hours in English are required for the Bachelor of Arts, and ten hours for the Bachelor of Science degrees. These credits are obtained somewhat differently in the several colleges: (1) in the College of Arts and Sciences by taking, during the freshman year, Courses 3, 4, 1a, and 1b; and during the sophomore year, Courses 2a and 2b, or 2c and 2d, or 8a and 8b; (2) in the College of Agriculture by taking, in the freshman year, Courses 3 and 4; in the sophomore year, Courses 1a and 1b; in the junior year, beginning with the fall semester of 1913, Courses 17 and 14; (3) in the College of Technology by taking Courses 3 and 4; and in the sophomore year, Courses 1a and 1b, and in the senior year Course 29.

English 3 and 4 or 3^1 and 4^1 are prerequisite, in all colleges, for courses of the sophomore year. The required courses of the freshman and sophomore years may not be postponed until the junior or senior year, without permission of the head of the department.

Elective courses in this department should be taken, so far as practicable, in the following order:

First year: Courses 6, 7.

Second year: Courses 6, 7, 8, perhaps 5a and 5b, 15, 20, 21, 31.

Third year: Courses 9, 10a and 10b, 11a and 11b, 12a and 12b, 13, 15, 16a and 16b, 18a and 18b, 19a and 19b, 20, 21, 23, 26, 32.

Fourth year: Courses 10a and 10b, 12a and 12b, 13, 9a and 9b, 23, 26, 18a and 18b, perhaps 24, 25, 27, 30, 33.

Students are expected to consult the head of the department, if they find it necessary to make a change.

For undergraduates only

1a and 1b. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first semester consists in voice training by means of prartice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second semester the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students' own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. *Once a week* throughout the year. Open only to freshmen in the College of Arts and Sciences.

1a[1] and 1b[1]. Public Speaking.—This course is entirely practical; the formal discussion of the theory of elocution is excluded. The work consists in the writing and delivery of speeches upon subjects in which the student is interested and informed. Speeches, argumentative or otherwise, will be written and delivered as if before a business corporation, a grange, an electrical engineering or other scientific society, a political organization, etc. Conferences will be held for criticism. Open only to sophomores in the Colleges of Agriculture and Technology. *One hour a week.* Fall and spring Semesters.

2a and 2b. Expository Composition.—A detailed and fairly complete study of the theory of exposition, with attention to prose style. Monthly

essays and conferences. *Two hours a week.* Fall and Spring semesters. Prerequisites, Courses 3 and 4, or 3^1 and 4^1.

2c and 2d. ARGUMENTATIVE COMPOSITION.—An advanced course in the theory and practice, oral and written, of argumentation. Monthly essays and conferences. *Two hours a week.* Fall semester. *One hour a week.* Spring semester. Prerequisites, Courses 3 and 4, or 3^1 and 4^1.

3. ENGLISH COMPOSITION AND RHETORIC.—The object of this course is to give training in writing correct and clear English, with attention also to oral expression. The theoretical work consists of the study of the fundamental principles of good usage in English writing; and of the expository form of composition, with some attention to the narrative and descriptive forms. In illustration of the theory many selections from literature are studied. Weekly themes and monthly essays, with conferences. This course is prescribed for freshmen in the College of Arts and Sciences. *Two hours a week.* Fall semester.

4. ENGLISH COMPOSITION AND RHETORIC.—The object of this course is the same as in Course 3. The theoretical work consists of the more elementary principles of argumentation; practice in making outlines and briefs; weekly themes and monthly essays. This course is prescribed for freshmen in the College of Arts and Sciences. *Two hours a week.* Spring semester.

3^1. ENGLISH COMPOSITION.—The theory and practice of composition adapted to the needs of technical students. The writing is mainly expository; weekly themes and monthly essays, with conferences. This course is prescribed for freshmen in the Colleges of Technology and Agriculture. *Three hours a week* in the College of Technology and *two hours a week* in the College of Agriculture. Fall semester.

4^1. ENGLISH COMPOSITION. The theory and practice of composition adapted to the needs of technical students. The writing is mainly argumentative, with attention to the less literary aspects of narrative and descriptive writing. Weekly themes and monthly briefs and essays, with conferences. This course is prescribed for freshmen in the Colleges of Technology and Agriculture. *Three hours a week* in the College of Technology and *two hours a week* in the College of Agriculture. Spring semester.

6. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall semester.

7. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring semester.

8a. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.* Fall semester.

8b. History of English Literature.—A continuation of Course 8a, covering the periods from the seventeenth century to the present day. *Three hours a week.* Spring semester.

10a. Shakespeare and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakespeare, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakespeare, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

10b. Shakespeare.—A detailed study of three or four great tragedies of Shakespeare. *Two hours a week.* Given in 1913-14 and alternate years.

11a. American Literature.—A lecture course giving an historical outline, with assigned reading. *Two hours a week.* Fall semester. Prerequisites, Courses 8a and 8b.

11b. American Literature.—A continuation of Course 11a. *Two hours a week.* Spring semester.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books. Specialized writing, as dramatic criticism, for students in journalism.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Prerequisites: Courses 3, 4, 2a, and 2b, or 2c and 2d, and 8. *Two hours a week.* Fall semester.

14. Literary Types.—Great books, typical of the several forms of literature, will be read. An endeavor will be made to cultivate an appreciation of the best, both in prose and poetry, and to acquire critical knowledge of what constitutes a great drama, a great epic, a great lyric, a great novel, etc. Open only to juniors in the College of Agriculture. *Two hours a week.* Fall semester.

15. Victorian Poets.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in the poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.* Fall and Spring semesters.

16a. History of English Literature.—A lecture course giving a brief survey of the development of English literature, extending to the close of the sixteenth century. Assigned reading and reports. *Two hours a week.* Fall semester. Open to technical students only.

16b. History of English Literature.—This course continues the work of 16a, covering the periods from the sixteenth century to the present time. *Two hours a week.* Spring semester. Open to technical students only.

17. Composition.—This course gives practice in technical journalism and news writing, in making reports and summaries of investigation, and in the preparation of theses. Open only to juniors in the College of Agriculture. *Two hours a week.* Spring semester.

18a and 18b. Debating.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading ques-

tions of the day debated. *Two hours a week.* Fall and Spring semesters. Prerequisites, Courses 1a and 1b, or 1a[1] and 1b[1] 3, 4, 2c, and 2d.

19a. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

19b. Elizabethan Poetry and Prose.—A continuation of Course 19a. The study of Elizabethan poetry will be completed, and the larger part of the semester given to the study of the prose of the period. *Two hours a week.* Spring semester. Given in 1913-14 and alternate years.

20. English Romantic Poets.—A general view of the English Romantic Movement, with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thomson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Fall semester. Given in 1914-15 and alternate years.

21. English Romantic Poets.—A continuation of Course 20. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Spring semester. Given in 1914-15 and alternate years.

22. Oral English.—A fundamental course in voice production, diction, and interpretation of literature. Practice in reading lyric, narrative, and dramatic forms with constant application to the requirements of public speech. *Two hours a week.* Spring semester. Prerequisites, 1a and 1b, or 1a[1] and 1b[1].

23a and 23b. Public Speaking.—Forms of address. A study of persuasion applied to letters, editorials, and speeches for various occasions. Preparation of public addresses, and practice in extempore speaking *Two hours.* Fall semester. Prerequisites, 1a and 1b, or 1a[1] and 1b[1].

29. Business English.—Correspondence, mechanical details, reports, preparation of manuscript for theses, and for technical journals. Prescribed for seniors in the College of Technolgy. *Two hours a week.* Fall semester.

32. Journalism.—This course gives training and practice in the fundamentals of newspaper writing: such as, observation or the seeing stories that have unique interest, "turning in tips," developing "news," "feature" and "human interest" stories, writing in journalistic style. A comparative study is made of the leading newspapers. *Three hours a week.* Fall and Spring semesters.

33. Journalism.—Practical newspaper work and technique. *Three hours a week.* Fall and Spring semesters. Prerequisite, Course 32.

For graduates and undergraduates

5a. Old English (Anglo-Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German. Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Fall semester. Given in 1913-14 and alternate years.

5b. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary, and archæological interests. *Three hours a week.* Spring semester. Prerequisite, Course 5a.

9a. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader. Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Fall semester. Prerequisite, Course 5a. Given in 1914-15 and alternate years.

9b. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical, and literary interests. *Three hours a week.* Spring semester. Given in 1914-15 and alternate years.

12a. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

12b. The Novel.—A continuation of Course 12a. *Two hours a week.* Spring semester. Given in 1913-14 and alternate years.

22. Cynewulf.—Reading of The Christ and The Elene; and possibly some of the poems attributed to Cynewulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Prerequisites, Courses 5a and 5b. *Three hours a week.* Fall semester.

24. The Victorian Period (1830-1900).—A study of the literary, social, and scientific movements in England and America. the rise of periodical literature, tractarianism, pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thackeray, George Eliot, Jane Austen, and the Brontes. *Two hours a week.* Fall and Spring semester.

25. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, lrama, anl the English metres. *Two hours a week.* Spring semester.

26. History of the English Drama.—Especial attention is given to the immediate predecessors and the contemporaries of Shakspere. *Two hours a week.* Given in 1912-13 and alternate years. Fall and Spring semesters.

27. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.* Fall and Spring semesters.

28. Teachers' Course in English.—A. This course is conducted in coöperation with the department of Education. It is open only to major students in English, and of these only, as a rule, to seniors and graduate students.

B. The aims, methods, and problems of teaching English composition and literature in high school and in college. Open to seniors who expect to teach English. The work is mainly practical with some theory. See Education 11a and 12a. *Two hours a week.* Fall semester.

Primarily for graduates

35. History and Theory of Literary Criticism.—*Three hours a week.* Fall and Spring semesters.

36. Types of Literature.—A comparative study of various literary forms. *Three hours a week.* Fall and Spring semesters. Prerequisite, Course 35.

37. Milton and His Age.—This course is devoted to problems of form, sources, and literary influences and relations. *Two hours a week.* Fall and Spring semesters.

30. Seminar.—The subject varies from year to year; and is determined by the needs of students in attendance.

Summer Term

Professor Slater; Mr. Bliss; Miss Worster

1. Courses in Preparatory English.—The work is designed for those who have entrance credits to make in this department.

a. English Composition.—The purpose of this course is to give a thorough drill in correct writing. Special attention will be given to spelling, grammar, punctuation, sentence and paragraph formation.

b. English Literature.—A careful, yet necessarily rapid, study of Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Washington's Farewell Address; Webster's First Bunker Hill Oration; and Macaulay's Life of Johnson.

2. Composition for Teachers of English.—This course includes the theory and practice of both oral and written composition. Problems connected with the teaching of composition in the schools will be discussed. Particular attention will be given to methods of conducting debates in high schools. Lectures, discussions, essays, and conferences. Not given in 1913.

3. English Composition and Rhetoric.—The work in this course is similar to that of the fall semester of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-books used will be Woolley's Hand-book of Composition, Baldwin's Composition, Gray's College Theme Tablet.

4. Expository and Argumentative Writing.—This course is similar to that of the spring semester of the freshman year. Baldwin's Composition, Chapters VI to X inclusive, is the basis of the theoretical part of the course. Essays and conferences.

5. Teachers' Course.—The aims, methods, and problems of teaching English composition and literature in the high school will be discussed and illustrated. Stress will be placed, this session, upon the preparation of the teacher, drill in the criticism of essays and the consideration of labor saving devices connected therewith, interest as a factor in the study of literature, development of ideas as a factor in composition, and the discussion of the important recently published articles on the teaching of English. The plan of the course is sufficiently flexible for the presentation of special topics or problems by the teachers in attendance, and so far as practicable, their problems will receive attention.

6. Shakespeare.—Lectures and discussions on Shakespeare's art. Four plays are studied in detail, and several more are required to be read. The Oxford Shakespeare, complete in one volume, is recommended.

7. Victorian Literature.—The lectures and discussions in this course centre about Tennyson as the most representative poet of the period. The main features of the works of Browning, Arnold, Carlyle, Newman, Ruskin, and Rossetti are rapidly surveyed.

8. Old English (Anglo-Saxon).—A first course, designed to introduce the student of English to the historical study of the language,

and to the beginnings of English prose and poetry. Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of Old English to Modern English and Modern German. Lectures on the literature of the period 700-1000. This course is essential for teachers of English, and for all who wish a thorough knowledge of the language and literature. This course may count 3 hours' credit toward the master's degree. Open to graduate students and advanced undergraduates.

9. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary and archaeological interests. Prerequisite, Course 8. Given in the summer of 1914. This course may count 3 hours credit toward the master's degree.

10. Types of Literature.—This course is an introduction to the study of comparative literature. Great books, typical of the principal forms of literature will be read. The aim of the reading and discussions will be to cultivate an appreciation of the best and to lay the foundations for a critical knowledge of what constitutes a great epic, drama, lyric, novel, etc. This course may count for three hours credit toward the master's degree. Open to graduate students, and undergraduates only by special permission. The course presupposes considerable knowledge of literature.

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry

GERMAN

Professor G. W. Thompson; Assistant Professor Drummond; Mr. Bain; Mr. Spear.

For undergraduates only

1 and 2. First Year German.—A course for beginners. German composition; numerous texts read; conversation. *Five hours a week* throughout the year.

3a, 3b. Second Year German.—A course for students who have had Courses 1, 2, or equivalent. The grammar study, composition, and text reading are progressively advanced from Courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

4a, 4b. Third Year German.—A course for students who have had Courses 1 and 2 and 3a and 3b or the equivalent. Texts include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week* throughout the year.

5a, 5b. Fourth Year German.—An advanced course for students who have had Courses 1, 2, 3a, 3b and 4a and 4b, or the equivalent. Texts include 19th century literature; advanced composition with original themes; lectures on the history of German literature continued. *Three hours a week* throughout the year.

These courses are carefully graded in difficulty and are to be taken in the order named.

Courses 1 and 2 are open only to students who are registered in the College of Arts and Sciences.

For the convenience of other students who wish to begin the study of German the following courses are offered:

Courses 1 and 2. A separate division for those who desire to pursue beginners' German five hours a week, or Courses 1a, 1b and 2a, 2b in which the work of Courses 1 and 2 may be completed in two years.

1a, 1b. Elementary German.—Study of grammar, composition, and easy texts which contain a practical vocabulary. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

2a, 2b. Continuation of Course 1a, 1b.—More advanced study of grammar, composition and texts. Open to students who have completed Courses 1a, 1b, or equivalent. *Three hours a week.* Fall semester. *Two hours a week.* Spring semester.

Note.—Course 2a, 2b is not equivalent for Course 3a, 3b.

6a, 6b. GERMAN CONVERSATION.—*Two hours a week* throughout the year.

11a, 11b. SCIENTIFIC GERMAN.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week* throughout the year.

For graduates and undergraduates

7a, 7b. ADVANCED CONVERSATION AND COMPOSITION.—*Two hours a week* throughout the year.

8a, 8b. HISTORY OF GERMAN LITERATURE.—Lectures with assigned readings. *One hour a week* throughout the year.

9a, 9b. HISTORY OF THE GERMAN NOVEL.—Lectures given in 1914-15 and alternate years. *Two hours a week* throughout the year.

10a, 10b. HISTORY OF THE GERMAN DRAMA.—Lectures given in 1913-14 and alternate years. *Two hours a week* throughout the year.

12a, 12b. HISTORY OF GERMAN EDUCATION.—Lectures. *One hour a week* throughout the year.

Primarily for graduates

13a, 13b. OLD HIGH GERMAN.—Wright's Old High German Primer. Open to students whose major subject is German. *Two hours a week* throughout the year.

14. GOTHIC.—Conditions for electing this course are the same as for Course 13a, 13b. Wright's Gothic Primer. *Two hours a week.* Fall semester.

15. MIDDLE HIGH GERMAN.—The condition for electing this course are the same as for Course 12 and 13. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.* Spring semester.

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

Summer Term

Professor G. W. Thompson; Mr. Samra

1. Elementary Course.—For those who wish to acquire or review the essentials of German grammar and the foundation of a German vocabulary.

2. Second Year German.—This course is designed for students who have completed a year's work in German or for such teachers as may wish to review their work in this department.

3. Conversational German.—For those who have taken at least one year of German and wish to get practice in speaking and hearing German. German stories will be reproduced orally and in writing. There will also be German dictation and memorizing of German songs. Twice a week.

4. German Literature.—A brief course of lectures covering a period of German literature. This course is designed for advanced students.

Other advanced courses in German may be substituted for Courses 2 and 4 if they seem better adapted to the needs of the students.

The following three courses are offered as graduate work leading to a degree and presuppose on the part of the student a reading and, as far as possible, speaking knowledge of the language.

5. A Critical Study of the Classical Period of the Eighteenth Century.—Lectures, references, and discussions. *Two hours a week.*

6. Naturalism in Germany, its Causes, Character, and Influence.—Lectures, references, and discussions. *Three hours a week.*

7. Goethe and Faust.—An incisive study of the life of Goethe; the origin and interpretation of Faust as a work of literature. *Two hours a week.*

GREEK AND CLASSICAL ARCHAEOLOGY

Professor Huddilston

The department of Greek and Classical Archæology is arranged with the idea of presenting the several phases of Hellenic civilization. Such courses are offered as will prove serviceable not only to those pursuing the classical languages, but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college curriculum some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

1. Xenophon.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall semester.

2. Homer.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring semester.

3. Attic Orators.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall semester.

4. Greek Tragedy.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required: also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring semester.

Courses 5-12 offer an introduction to the literature, religion, customs, art, and history, and may be taken by students who may wish to devote only a year or two to Greek subjects.

5. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of Greek based on the text. *Five hours a week.* Fall semester.

6. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose selections from Homer's Iliad. *Five hours a week.* Spring semester.

7. Greek Private Life.—Text-book, lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.* Fall semester.

8. Greek Religion.—A study of the chief divinities in ancient Greek religion, and their relation to art and literature; lectures and assigned reading; investigation of special topics by members of the class. *Two hours a week.* Spring semester.

9. Greek Literature.—The history of poetry; epic, lyric and dramatic. Types and standards of verse composition established by the ancient Greeks and some consideration of the Greek influence upon later poetry, particularly the epic. Lectures and readings from English translations. Each student will be expected to make a special study of some one author and in the treatment of Aeschylus, Sophocles, and Euripides, at least one play of each will be read in class, members of the class taking the several parts. This course as well as the next on prose literature, is intended to be foundational for students majoring in classics or in modern languages. *Three hours a week.* Fall semester of 1913-14 and alternate years.

10. Greek Literature.—The history of prose literature in ancient Greece. History, oratory, and philosophy will be traced in succession. Students will be expected to do parallel reading, especially in Demosthenes and Plato. This course may be taken only in connection with Gk. 9 and like the latter is intended to place the student in touch with the forces of lasting value in Greek letters. *Three hours a week.* Spring semester of 1913-14 and alternate years.

11. Greek History.—The history of Greece proper will be preceded by some account of the civilizations in the Tigris-Euphrates and Nile valleys; problems of historic documents and the important original records for the early nations including the Semetic peoples will be considered; the advent of the Hellenic race in the history of Europe; the connecting links between the East and the West. Lec-

tures, assigned readings, and reports on special topics by members of the class. Open to all students and not presupposing any knowledge of foreign languages. *Three hours a week.* Fall semester of 1914-15 and alternate years.

12. Greek History.—A continuation of the preceding course with emphasis laid upon the mission of the Greeks in the eastern Mediterranean basin; the Greek world at the advent of the Romans in the East; the influence of Greek civilization in the rise of Christianity, and the persistance of Greek learning and thought in the early centuries of our era. Open to all students but especially adapted to those who have taken Course 11. Lectures, and collateral reading. *Three hours a week.* Spring semester of 1914-15 and alternate years.

17. History of the Old Testament.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Canon will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Fall semester.. Given in 1913-14 and alternate years.

18. History of the New Testament.—A continuation of Course 17. Open to all students. *One hour a week.* Spring semester. Given in 1913-14 and alternate years.

Courses Greek 10 and 12 and Art 2, 3, and 4 may be counted towards the master's degree

History of Fine Arts

For several years there have been a three hour course in Greek Fine Arts during the spring semester, and four courses on the history of Italian Painting given one hour per week through a period of four semesters.

Beginning with the fall semester of 1913, instruction in the history of the Fine Arts will be materially enlarged.

There are courses extending through four semesters presenting an opportunity for the student to cover the entire field of ancient and medieval and modern art history in its various bearings on the history of Europe down to the close of the 18th century.

Oriental, Greek, and Roman art will be given in a three hour course extending through the year and medieval and modern art will follow this for two semesters for the same number of periods.

While it is not absolutely essential that a student should have taken Courses 1 and 2 in order to be admitted to 3 and 4 it is highly desirable that a sequence should be observed and that the historical evolution of the great art epochs should be approached in such a manner as to contribute the largest educational values

1. Art.—The history of art in ancient Egypt and western Asia, with special reference to the buildings of the Egyptians as exhibiting the best index to the history of that remarkable race. This chapter will be a foreword to the beginnings of art in southeastern Europe; the Cretan and Mycenaean periods preceding the early Greek period. The history of Greek architecture and sculpture will be given down to the beginning of Athenian supremacy. The extant monuments will be studied in photographs and with the aid of the stereopticon. Lectures, note-books, text-book, and discussions. *Three hours a week.* Fall semester, 1913-14 and alternate years.

2. Art.—Greek and Roman art in their broad relations to the life of classical times; the influence of art as a dominant force in Greece and the effects of Greek culture upon Rome; the passing of Greek art to Latin soil; the notable national monuments of Rome. The existing remains in the European museums as well as the monuments still *in situ* in Italy, Sicily, Greece, and Asia Minor will be gone over in detail with the photographs.

Each student will be expected to acquire some ability in estimating the styles of the various epochs. Lectures. *Three hours a week.* Spring semester, 1913-14 and alternate years.

3. Medieval Art.—The history of art as influenced and modified by Christianity; Romanesque and Gothic in the West and North; the early centuries of painting in Italy and the influence of the fine arts in the 14th and 15th centuries, particularly in Florence, Siena, Ravenna, Venice, and Rome; the spirit of the Renaissance in Italy, France, and Germany under the domination of Italy. Lectures, study of photographs and investigation of various topics. *Three hours a week.* Fall semester, 1914-15 and alternate years.

4. Modern Art.—Art in the north of Europe and in Spain, particularly the schools of painting and palace architecture in France. The age of Louis XIV reflected at Versailles and in the Louvre; the new importance of artists as international factors at Madrid, Paris, and London; social evolution and contemporary history reflected in the successive schools of artists with the gradual ascendency of France until the time of the French Revolution. Lectures; study of pictures; special subjects for individual investigation. *Three hours a week.* Spring semester, 1914-15 and alternate years.

5. Architecture.—A chronological survey of the development of architecture down to 1600 A. D. Greek, Roman, and early Christian architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures, outside reading, and detailed study of the photographs in the art collection. Open to all students. *Two hours a week* for the year.

6. Architecture.—A continuation of Course 5. *Two hours a week.* Spring semester.

7. Art Ideals of the Great Nations. A course for the general student, setting forth some of the fundamentals of art development in ancient Egypt, Greece, and Rome and in modern Italy, France, Spain, Germany, and England. Not open to students who have taken Courses 1 to 4. *One hour a week.* Spring semester.

8. Art Collections of Europe. A brief discussion of the most important museums and galleries; what they are noted for, and their importance for the history of painting anl sculpture. Lectures. Open to all students. *One hour a week.* Spring semester.

HISTORY

Professor Colvin; Assistant Professor Matthews

Greek History and Roman History are given in the departments of Greek and Latin

For undergraduates only

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesias-

tical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Open to all students. *Three hours a week.* Fall semester.

2. Modern History.—Continuation of Course 1 to the present time. A rapid survey of the Reformation; the absolute monarchy in France, the French Revolution; the Napoleonic era; Europe in the nineteenth century. Open to all students. *Three hours a week.* Spring semester. Courses 1 and 2 are given in 1914-15 and alternate years.

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Open to all students. *Three hours a week.* Fall semester.

4. History of England.—Continuation of Course 3. From the beginning of the Stuart period to the present. Open to all students. *Three hours a week.* Spring semester. Courses 3 and 4 will be given in 1913-14 and alternate years.

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.* Fall semester.

6. History of the United States.—The period from 1783 to 1848. This course will begin with a brief study of Colonial history from 1750. Open to all students. *Three hours a week.* Fall semester.

7. History of the United States.—A continuation of Course 6, from 1848 to the present time. Open to all students. *Three hours a week.* Spring semester.

8. Industrial and Social History of England.—The medieval manor town, guild, and foreign trade; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. *Two hours a week.*

For graduates and undergraduates

9. The Renaissance and the Reformation.—The period from 1300 to 1658 A. D. *Two hours a week.*

10. The Renaissance and the Reformation.—A continuation of Course 9. *Two hours a week.*

11. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

12. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

13. Modern Continental Europe.—The period since 1815. *Three hours a week.*

14. Historical Construction and Criticism.—*One hour a week.*

Summer Term

1. United States History.—This course will be open to regular undergraduate students, and will cover the period since the close of the Mexican War.

2. Modern European History.—This course will consist of a rapid review of the period from 1815 to 1878, with a more detailed study from 1878 to the present time. When the class forms, if the study of another period is desired, a change may be made.

3. Primarily for Graduates.—A course will be offered for graduate students and others who are prepared to take it. The subject will be determined by the previous work of the students who desire to elect it.

This course will be planned to fit into the scheme of graduate work to be offered in the Summer Term leading to the M. A. degree.

LATIN

Professor Chase

For undergraduates only

1. Livy and Composition.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four hours a week.* Fall semester.

2. Cicero and Horace.—Cicero, De Senectute; Horace, Odes and Epodes; Latin composition. *Four hours a week.* Spring semester.

Courses 1 and 2 are required of candidates for the Bachelor of Arts degree who elect Latin.

3. Tacitus.—Reading and discussion of the Agricola and Germania. *Three hours a week.* Fall semester.

4. Terence and Plautus.—The Phormio of Terence; the Captivi and Trinuminus of Plautus; study of early Latin and the development of Roman comedy. *Three hours a week.* Spring semester.

21. Teachers' Course.—Discussion of topics connected with the teaching of Latin in secondary schools. Study of selected passages of Cæsar, Cicero, and Vergil. *One hour a week.* Fall semester.

25. Roman History.—The development of Rome to the time of Augustus. Lectures, reading, and recitations. *Three hours a week.* Given in the fall semester of 1913-14 and alternate years.

26. Roman History.—The Roman Empire. A continuation of course 25. *Three hours a week.* Given in the spring semester of 1914 and alternate years.

For graduates and undergraduates

5. Latin Composition.—Practice in writing Latin; study of Latin syntax. *One hour a week.* Fall semester.

6. Latin Composition.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.* Spring semester.

7. The Younger Pliny.—Reading of selected letters of Pliny; the Roman Empire. *Three hours a week.* Given in the fall semester 1914-15 and alternate years.

8 Horace and Juvenal.—Reading of selections from the great satirists; study of Roman satire and social life. *Three hours a week.* Given in the spring semester of 1915 and alternate years.

9. Tacitus.—Reading of the Annales and study of the reign of Tiberius. *Three hours a week.* Given in the fall semester of 1913-14 and alternate years.

10. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; study of elegiac poetry. *Three hours a week.* Given in the spring semester of 1914 and alternate years.

18. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken Courses 1-4. *One hour a week.* Given in the fall semester of 1913-14 and alternate years.

Primarily for graduates

11. Roman Philosophy.—Reading from Cicero's philosophical writings and from Lucretius; discussion of the leading schools of ancient philosophy. *Three hours a week.* Given in the fall semester of 1914-15 and alternate years.

12. A continuation of Course 11. *Three hours a week.* Given in the spring semester of 1915 and alternate years.

13. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken Courses 1-4. *Three hours a week.* Given in the fall semester of 1914 and alternate years.

14. Roman Literature.—A continuation of Course 13. *Three hours a week.* Given in the spring semester of 1915 and alternate years.

15. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken Courses 1-4. *Three hours a week.* Given in the fall semester of 1913-14 and alternate years.

16. Roman Rhetoric and Oratory.—A continuation of Course 15. *Three hours a week.* Given in the spring semester of 1914 and alternate years.

19a. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages; Latin Phonetics; the development of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in the fall semester of 1914 and alternate years.

19b. The Latin Language.—A continuation of 19a. *One hour a week.* Given in the spring semester of 1914 and alternate years.

22. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

23. Sanskrit.—A continuation of Course 22, with more attention to the classical literature of India. *Two hours a week.*

24. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archaeology, etc. *One hour a week.* Given in the fall semester of 1914-15 and alternate years.

MATHEMATICS AND ASTRONOMY

Professor Hart; Associate Professor Willard; Assistant Professor Hamlin; Mr. Wilbur; Mr. Nordgaard; Mr. Spear

Students electing Mathematics as a major subject should expect to take Courses 1, 2, 6, 7, 8, 11, 12, 13, 15, 19, 20, 21, and either Courses 9 and 10 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

For undergraduates only

1. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book is Hart-Feldman's Solid Geometry. *Three hours a week.* Spring semester. Open to all freshmen who did not offer it for admission.

2. Algebra and Trigonometry.—A brief review of radicals, the theory of exponents, quadratic equations, and the binominal theorem; logarithms, including practice in the solution of numerical exercises; the trigonometric functions; radian measure; functions of several angles; solution of right and of oblique triangles; trigonometric equations; inverse functions; determinants; theory of equations. The text-books are Rietz and Crathorne's Algebra, and Lyman and Goddard's Trigonometry. *Five hours a week.* Fall semester.

3. Applications of Trigonometry.—A course given for students in Agriculture and Forestry, and open to others who have taken Course 2. Further practice in the solution of problems with application to plane surveying. *Two hours a week.* Spring semester.

6. Analytic Geometry.—The point, line, circle, and conic sections; higher plane curves; elements of solid analytic geometry. The text-book is Tanner and Allen's Analytic Geometry. *Five hours a week.* Spring semester. Open to students who have had Course 2 and the equivalent of Course 1.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken Courses 1, 2, and 6. The text-book is Granville's Differential and Integral Calculus *Five hours a week.* Fall semester.

8. Calculus.—A continuation of Course 7. Integration of the elementary forms; integration between limits; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring semester.

9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, illustrated by lantern slides, drawings of celestial objects, and work in the observatory. Open to students who have taken Courses 1, 2 and, preferably, Physics 1 and Physics 5. The text-book is Young's Manual of Astronomy. *Three hours a week.* Spring semester.

For graduates and undergraduates

10. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the con-

version of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the students' own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, vertical circle, astronomical transit, and zenith telescope. Open to students who have taken Courses 9, 2, and 19. *Two hours of recitations or lectures and two hours of observatory work a week.* Fall semester.

11. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken Courses 1 and 2. *Three hours a week.* Fall semester.

12. Advanced Calculus.—This course is varied from time to time by using different texts. Open to students who have taken Courses 6, 7, and 8. *Three hours a week.* Given in the fall semester of 1913-14 and alternate years.

13. Advanced Integral Calculus.—A continuation of Course 12. *Three hours a week.* Given in the spring semester of 1913-14 and alternate years.

15. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken Courses 7 and 8. *Two hours a week.* Spring semester.

16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students who have taken Courses 6, 7, 8, 9, and, preferably, 10. *Three hours a week.* Fall semester.

17. Practical Astronomy.—A continuation of Course 16. *Three hours a week.* Spring semester.

19. Spherical Trigonometry.—The elements of this subject with problems and applications to spherical astronomy. *Two hours a week.* Spring semester.

20a. Advanced Analytic Geometry.—A course for students who have completed Courses 6, 7, 8, and 11. *Three hours a week.* Given in the fall semester of 1914-15 and alternate years.

20b. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in the spring semester of odd years.

21a. History of Mathematics.—Lectures and recitations. *Two hours a week.* Given in the fall semester of 1914-15 and alternate years.

21b. History of Astronomy.—Lectures and recitations. *Two hours a week.* Given in the spring semester of 1914-15 and alternate years.

22. Differential and Integral Calculus.—A course given for students in Chemistry and for those in the College of Arts and Sciences who desire only a brief course in these subjects. *Three hours a week.* Fall semester.

Primarily for graduates

23a. Theory of Functions of a Complex Variable.—*Three hours a week.* Fall semester.

23b. Theory of Functions of a Complex Variable.—A continuation of Course 23a. *Three hours a week.* Spring semester.

24a. Modern Analytic Geometry.—*Three hours a week.* Fall semester.

24b. Modern Analytic Geometry.—A continuation of Course 24a. *Three hours a week.* Spring semester.

Courses 23a and 23b not given in 1913-1914. Other advanced courses will be given when called for.

For courses in mechanics and in descriptive geometry, refer to the department of Mechanics and Drawing, and for courses in surveying refer to the department of Civil Engineering.

Summer Term

Professor Hart; Assistant Professor Willard; Mr Reed

Courses 1, 2, 3, and 4 are planned to meet the needs of high school teachers who wish to review the subjects, or to study methods of teaching, as well as those of prospective candidates for admission to college who have not fully satisfied the entrance requirements in these subjects. The remaining courses should appeal to teachers of high school mathematics who wish to extend their field of mathematical knowledge or who wish to become candidates for the bachelor's degree.

The department will welcome inquiries from teachers who wish to take work in mathematics or astronomy to count towards the attainment of the master's degree.

By suitable selection of topics, a student should be able to complete the work for the master's degree in four summer terms, or more, depending upon his mathematical ability and previous mathematical preparation.

1. High School Algebra.—A course intended for teachers in preparatory schools and covering the second year's work. Especial attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are also advised to take this course.

2. Plane Geometry.—A review of the more important theorems, with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools and for candidates for admission who are slightly deficient in geometry.

3. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Hart and Feldman's Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Wells's, and other books will be used for reference.

4. Plane Trigonometry.—The elements of plane trigonometry, including the solution of right and oblique plane triangles, and of prob-

lems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which may be useful for reference.

5. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. The text-book is Hawkes's Advanced Algebra.

6. Analytic Geometry.—A brief course covering the elements of this subject. The text-book is Rigg's Analytic Geometry.

7. Differential and Integral Calculus.—A course intended for teachers in preparatory schools, who wish to gain a knowledge of the elements of this subject.

8. Descriptive Astronomy.—Lectures accompanied by work in the observatory. The only mathematics required is an elementary knowledge of geometry and plane trigonometry. The department is well equipped with instruments and apparatus for the teaching of both descriptive and practical astronomy.

9. Advanced Analytic Geometry, equivalent to Course 20a.

10. Advanced Calculus, equivalent to Course 12.

11. Theory of Functions, equivalent to Course 23a.

12. Mechanics, equivalent to Course 6.

13. Observatory Work.

The department is supplied with a carefully selected list of Mathematical models, and for work in astronomy has a well equipped observatory. The equipment includes an eight inch Clark equatorial, a three inch Bamburg astronomical transit, and other smaller instruments.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 233

PHILOSOPHY

Professor Craig

For undergraduates only

1a. Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and the psychology of sensation, perception, instinct, habit, and memory. The methods used are recitation, discussion, introspection (self-observation), observation of others, experiment, and demonstration. Students electing this course are advised to precede or accompany it with Biology 1; or if this be impossible, to read some good, recent book on evolution, and a similar work on human physiology. Two text-books: James's Psychology (Briefer Course); Pillsbury's Essentials of Psychology. *Three hours a week.* Fall semester. Open to upperclassmen. Freshmen may in special cases be permitted to elect the course.

5b. Deductive Logic.—The purpose of this course is to develop clear thinking and the precise expression of thought in words. This is done largely by exercise in the solution of logical problems. Text-book: Creighton's Logic. *Two hours a week.* Spring semester.

For graduates and undergraduates

1. Evolution.—Theories of biological evolution. The evolution of animal behavior; mental evolution; social evolution; evolution of man. The course gives a concise treatment of these topics, as a foundation for studies in psychology, sociology, and allied fields. Text-book: Parmelee's Science of Human Behavior. Open to upperclassmen. Freshmen may in special cases obtain permission to enter the class. *Two hours a week.* Fall semester.

1b. Psychology. A continuation of Course 1a, dealing especially with the higher psychic functions, such as imagination, conception, emotion, and will. All students who have taken Course 1a are advised to follow it with 1b. *Three hours a week.* Spring semester.

3. Practical Ethics.—A course designed to give the student practical aid in his or her life. A study of those qualities which chiefly

contribute to success, as, honesty, industry, thrift, system, tact, sympathy, etc. No text-book. The students will write short accounts of their own experiences in the matters studied. *Two hours a week.* Fall semester. Open to upperclassmen.

4. Social Psychology.—A study of the social aspects of the individual mind; of the instincts which underly all social life; of social influence and social control; of fashion, convention, and custom; of the crowd, the mob, the public, and the deliberative assembly. *Two hours a week.* Spring semester. Open to students who have had Courses 1, or 1a and 1b, or the equivalent.

5a. Inductive Logic.—A study of the methods of science; the methods of gathering facts and of deriving correct conclusions from the facts. The text-book is Creighton's Logic. *Two hours a week.* Fall semester. Open to upper classmen, especially to those who have had some training in science.

6. History of Ancient Philosophy.—Designed to give an insight into Greek and Roman thought as related to the life of the Greeks and Romans, and also to lay the foundation for a study of modern thought. Rogers's A Student's History of Philosophy is used as a text-book. *Three hours a week.* Fall semester of 1914-15 and alternate years. Open to upperclassmen.

7. History of Modern Philosophy.—Continuation of the preceding course, but may be taken separately, having different interests, connected with modern history and modern thought in literature, science, art, and politics. Text-book as in the preceding course. *Three hours a week.* Spring semester of 1915 and alternate years. Open to upperclassmen.

11. Metaphysics.—Philosophic thought of the present day; as, that of Royce, James, Dewey, Bertrand, Russell, Bergson, etc. Realism, pragmatism, idealism, etc. Problems of the nature of matter, of the relation between mind and body; of analysis into elements, of truth and error, of illusions, etc.; foundations of science; study of axioms, of definitions, of generalizations, of laws of nature, of scientific theory.

Text-book: Marvin's First-Book in Metaphysics. *Two hours a week.* Fall semester of 1913-14 and alternate years. Open to upperclassmen.

13. Child Psychology.—Open to students who have had Course 1, or 1a and 1b. *Two hours a week.* Spring semester.

14. Theoretical Ethics.—Problems of law, of duty, of justice, of the relation between desire, motive, and intention; of freedom or determinism; etc.; Hedonism, utilitarianism, intuitionism, evolutionary theories, theory of the good as self-realization, etc.; theories of Kant, Bentham, Spencer, Mill, Darwin, G. E. Moore, etc. Open to upperclassmen in the College of Arts and Sciences. *Two hours a week.* Spring semester 1914-15 and alternate years.

Primarily for graduates

8. Seminar.—Reviews of current psychological literature. Social psychology is emphasized. Magazine articles or books are assigned to individual students, to be abstracted and reported upon. The student may select those topics in which he is specially interested. The work may be continued a number of semesters. Open to students who have had courses 1a and 1b, or equivalent. *One hour a week.* Fall or spring semester.

9. Research.—*The number of hours a week* is not fixed, but must be arranged at the time of registration. Fall or spring semester.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 234

PHYSICS

Professor Stevens; Associate Professor Woodman; Mr. Transue; Mr. Holmes

Note.—For students who are specializing in this department, the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.

For undergraduates only

1. General Physics.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 2. *Five hours a week.* Fall semester.

2. General Physics.—A continuation of Course 1. Heat and electricity. *Three hours a week.* Spring semester.

3. Qualitative Laboratory Work.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in Courses 1 and 2. **Five hours a week.* Fall semester.

4. General Physics.—A course covering the ground of Courses 1 and 2, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Hering's Physics. *Five hours a week.* Fall semester.

5. Laboratory Physics.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either Course 1 or Course 4. **Five hours a week.* Spring semester.

6. Meteorology.—A course covering the essential principles of the subject of meteorology, including a study of meteorological instruments and weather predictions. Milham's Meteorology is used as a text-book. *Two hours a week.* Spring semester.

For graduates and undergraduates

6a. Meteorology.—A continuation of Course 6, dealing with special topics, and a discussion of the results obtained at the meteorological observatory. *One hour a week recitation, †two hours a week laboratory.* Fall semester.

7. Optics.—Lectures and recitations in continuation of Course 1, based chiefly upon Edser's Light. Open to students who have taken

Mathematics 8. *Three hours a week.* Spring semester of 1913-14 and alternate years.

8. Optics.—Advanced laboratory work in continuation of Course 5. **Seven and one-half hours a week, or* **five hours a week.* Spring semester.

9. Mechanics and Heat.—Advanced laboratory work in continuation of Course 5. **Seven and one-half hours a week, or* **five hours a week.* Fall semester.

10. Theory of Electricity and Magneticism.—Lectures and recitations on the mathematical theory of potential, capacity, and inductance, with applications to direct current phenomena. Electricity and Magnetism by Hough and Boehm is used as a text-book. *Two hours a week.* Fall semester.

10a. Problems in Electricity.—This course can only be taken in connection with Physics 10 or Physics 12, as the problems will be selected from the work covered in those courses. *One or two hours a week.* Fall semester.

11. Electrical Measurements.—Advanced laboratory work in continuation of Course 5. **Seven and one-half hours a week.* Fall semester.

12. Theory of Electricity and Magnetism.—Continuation of Course 10, with applications to alternating current phenomena; the addition and subtraction of vector quantities; the analysis of wave forms by use of Fourier's series; the algebra of complex numbers. *Two hours a week.* Fall semester. Not given in 1913-1914.

13a. Heat.—An advanced course in heat in continuation of Course 2. The text-book is Edser's Heat. *Three hours a week.* Given in the fall semester of 1913-1914 and alternate years.

13b. Thermodynamics.—An elementary course in thermodynamics. The text-book is Perkins's Introduction to General Thermodynamics. *Two hours a week.* Spring semester.

13c. Problems in Thermodynamics.—This course may be taken in connection with 13b, by those desiring further training in the solution of practical problems in thermodynamics. The text book will be Spangler's Notes on Thermodynamics. *One or two hours a week.* Spring semester.

14. Mathematical Physics.—The application of mathematical methods to the treatment of problems in physics. The text-book is Mellor's Higher Mathematics. *Two hours a week.* Spring semester of 1912-13 and alternate years.

18. Electricity and Optics.—Advanced laboratory work in continuation of Course 5. **Five hours a week.* Fall semester.

19. Least Squares.—A course of lectures covering the more important topics treated in this subject. *Two hours a week.* Fall semester.

19a. Precision of Measurements.—A brief course of lectures required of juniors in Mechanical Engineering. *Two hours a week for five weeks.* Fall semester.

Primarily for graduates

15. Special Laboratory Course.—A course open to students who have completed Courses 8, 9, and 11. A subject is assigned for original investigation, or the work of a published research is repeated. **Five hours a week.* Fall semester.

16. Special Laboratory Course.—A continuation of Course 15. **Seven and one-half hours a week.* Spring semester.

17. Radiation.—This course will include lectures and outside reading on the following topics: the electromagnetic theory of light; the development of Maxwell's equations; the application of Maxwell's equations to the reflection, refraction, and polarization of light; the radiation and absorption of a theoretical black body; the theories of emission and absorption; electric waves and light pressure. *Two hours a week.* Fall semester 1914-15 and alternate years.

Physics

Summer Term

Professor Stevens; Associate Professor Woodman

1. Elementary Laboratory Course.—This includes a list of experiments which would be accepted for admission to the University of Maine. The course is especially adapted for teachers who wish to become familiar with the methods of conducting an elementary laboratory course. The complete set of apparatus is assembled in the laboratory, and full directions are given for performing each experiment.

2. The General Laboratory Course.—This corresponds to the course given in the University for all students in the College of Technology. It is based on Miller's Laboratory Manual, and includes experiments along the lines of mechanics, heat, light, sound, and electricity.

3. College Physics.—A course based upon those parts of Carhart's College Physics which treat of mechanics, light, and sound. This course may be taken for credit only by students who have covered the ground in Physics 1.

4. College Physics.—A course based upon those parts of Carhart's College Physics which treat of electricity and heat. This course may be taken for credit by university students who have covered the ground in Physics 2.

5. Advanced Laboratory Courses.—These courses are offered in optics, electrical measurements, and heat. They are of a more advanced nature than those in number 2, which is a prerequisite for them.

6. Advanced Laboratory Course for Graduate Work.—This course will be adapted to the requirements of the students, and will be offered to such students as have completed the courses above listed. The work will be in the nature of a repetition of a published experiment, or it may be an original investigation.

7. Advanced Physics.—A course for candidates for the master's degree will be offered in this department each summer. The course will vary for four successive terms so that the student may have an opportunity to cover a wide field. For the coming term the subject will be

Light. The work will be based on Edser's Light, and will, when completed, count for two credits on the university books.

ROMANCE LANGUAGES AND LITERATURE

Professor Segali; Associate Professor Raggio; Mr. Roche

French

1. Elementary French.—Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation. *Five hours a week.* Fall semester.

2. Elementary French.—A continuation of Course 1. Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation; Rambeau, French Reader; Newson's First French Book; Bruno, Le Tour de la France. *Five hours a week.* Spring semester.

3a. Intermediate French.—Fraser and Squair, Abridged French Grammar; Lamartine, Histoire des Girondins (selections). About 250 pages of collateral reading will be assigned. Open to students who have taken Courses 1 and 2, or an equivalent. *Three hours a week.* Fall semester.

3b. Intermediate French.—A continuation of Course 3a. Fraser and Squair, Abridged French Grammar; Sand, La Mare au Diable. About 250 pages of collateral reading will be assigned. *Three hours a week.* Spring semester.

4a. Advanced French.—Anatole France, le Crime de Sylvestre Bonnard; modern short stories. Collateral reading: Lacombe, Petite histoire du peuple français; Augier: le Gendre de M. Poirier. Open to students who have taken Courses 3a and 3b, or an equivalent. *Three hours a week.* Fall semester.

4b. Advanced French.—A continuation of Course 4a. Moliere, le Misanthrope; Loti, Pêcheur d'Islande. Collateral reading: Strachey, Landmarks in French Literature; About, le Roi des Montagnes. *Two hours a week.* Spring semester.

5a. Elementary French Composition and Conversation.—Open to students who have taken Courses 1 and 2, or an equivalent. *Two hours a week.* Fall semester.

5b. Elementary French Composition and Conversation.—A continuation of Course 5a. *Two hours a week.* Spring semester.

6a. Introduction to the History of French Literature.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Three hours a week.* Fall semester.

6b. Introduction to the History of French Literature.—A continuation of Course 6a. *Two hours a week.* Spring semester.

7a. Advanced French Composition and Conversation.—Open to students who have taken Courses 5a and 5b, or an equivalent. *Two hours a week.* Fall semester.

7b. Advanced French Composition and Conversation.—A continuation of Course 7a. *Two hours a week.* Spring semester.

12a. History of French Literature in the Eighteenth Century.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Two hours a week.* Fall semester. Given in 1913-14 and alternate years.

12b. History of French Literature in the Eighteenth Century.—A continuation of Course 12a. *Two hours a week.* Spring semester. Given in 1913-14 and alternate years.

13a. History of French Literature in the Nineteenth Century; The Romantic Period.—Lectures, recitations, reports. Open to students who have taken Courses 4a and 4b. *Two hours a week.* Fall semester. Given in 1914-1915 and alternate years.

13b. History of French Literature in the Nineteenth Century; The Realistic Period.—A continuation of Course 13a. *Two hours a week.* Given in 1914-15 and alternate years.

17. History of the French Theatre in the Seventeenth Century: Molière.—*One hour a week.* Fall semester. Primarily for graduate students.

18. History of the French Theatre in the Nineteenth Century: Augier; Dumas fils.—*One hour a week.* Spring semester. Primarily for graduate students.

Spanish

9a. Elementary Spanish.—Hills and Ford, Spanish Grammar. *Three hours a week.* Fall semester.

9b. Elementary Spanish.—A continuation of Course 9a. Hills and Ford, Spanish Grammar; Ramsey, Elementary Spanish Reader; Dent's First Spanish Book. *Three hours a week.* Spring semester.

10a. Intermediate Spanish.—Hills and Ford, Spanish Grammar; Pérez Escrich, Fortuna; Alarcón, El Capitán Veneno; Moratín, El sí de las niñas. About 250 pages of collateral reading will be assigned. Open to students who have taken Courses 9a and 9b, or an equivalent. *Three hours a week.* Fall semester.

10b. Intermediate Spanish.—A continuation of Course 10a. Pereda, Pedro Sánchez. About 250 pages of collateral reading will be assigned. *Three hours a week.* Spring semester.

19a. Spanish.—Open to students who have taken Courses 9a and 9b, or an equivalent. *Two hours a week.* Fall semester.

19b. Spanish.—A continuation of Course 19a. *Two hours a week.* Spring semester.

Italian

11a. Elementary Italian.—Grandgent's Italian Grammar. Pictorial Italian Course. *Three hours a week.* Fall semester.

11b. Elementary Italian.—A continuation of Course 11a. Grandgent's Italian Grammar; Bowen's First Italian Readings; I Promessi Sposi. *Three hours a week.* Spring semester.

14a. Italian Classical Literature.—In this course the whole of Dante's Inferno and parts of the Purgatorio and Paradiso, will be translated. Selections from Pulci's Morgante, Boiardo's Orlando Innamorato, Ariosto's Orlando Furioso, and Tasso's Gerusalemme liberata will also be studied. The following texts will be used: D'Ancona and Bacci's Manuale della letteratura italiana, Vol. II (Firenze, Barbèra); Ferrari's edition of Tasso's Gerusalemme liberata (Firenze, Sansoni); Scartazzini's edition of Dante's La Divina Commedia (Milano, Hoepli). The following books will be used as collateral reading: Snell's Primer of Italian Literature (Oxford, Clarendon Press); Gardner's Dante (London, J. M. Dent & Co.). Open to students who have taken Courses 11a and 11b, or an equivalent. *Three hours a week.* Fall semester.

14b. Italian Classical Literature.—A continuation of Course 14a. Scartazzini's edition of Dante's La Divina Commedia (Milano, Hoepli); Gardner's Dante (London, J. M. Dent & Co.) *Three hours a week.* Spring semester.

Romance Philology

15a. Old French.—This course is intended for students who wish to acquire a reading knowledge of Old French. The laws governing the development of Popular Latin to French will also be studied. The books used will be Bourciez' Phonétique française (Paris, Klincksieck); Paris's Extraits de la Chanson de Roland (Hachette et Cie); Clédat's edition of the Chanson de Roland (Garnier frères). Students will be expected to read outside the class during the fall and spring semesters Paris's La littérature française au moyen âge (Hachette et Cie). Some acquaintance with Latin is presupposed. *Two hours a week.* Fall semester.

15b. Old French.—A continuation of Course 15a. Paris and Langlois' Chrestomathie du moyen âge (Hachette et Cie). *Two hours a week.* Spring semester.

Summer Term

Professor Hedman; Associate Professor Raggio; Mr. Samra.

A. Primarily for undergraduate students

French

Courses 2a, 2b, 6a, 6b, 6c, 7a, 7b, and 7c will be offered if a sufficient number of students call for them.

1a. Elementary Course.*—This course is intended for beginners. The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 1-73.

1b. Continuation of Course 1a.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.). pp. 73-128; Rambeau's French Reader (Henry Holt & Co.).

1c. Continuation of Course 1b.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.); Rambeau's French Reader (Henry Holt & Co.); Bruno, Le Tour de la France.

2a. Intermediate Course.—This course is intended for those who have already the required number of points for entrance French, and who desire a course in French that may be counted towards a bachelor's degree. The text-books used will be Augier and Sandeau, le Gendre de M. Poirier (American Book Co.); France, le Livre de mon ami (Henry Holt & Co.); Gasc's Concise Dictionary of the French and English Languages. (Henry Holt & Co.).

2b. Continuation of Course 2a.—The text-book used will be Lamartine's Histoire des Girondins (selections). Collateral reading will be assigned.

3. Practical French Phonetics.—This course is intended for teachers who wish to concentrate their efforts upon French pronunciation.

*The requirements for entrance French may be met by taking Courses 1a, 1b, and 1c in consecutive years.

†Students who already have one of the two units required for entrance French may complete their requirements during one summer term by taking Courses 1b and 1c.

The members of the class will be made familiar with the alphabet of L'Association Phonétique Internationale, and will be expected to read, memorize, and declaim passages printed in phonetic characters. Some acquaintance with French is presupposed.

4. Elementary French Composition and Conversation.—Open to students who have taken Courses 1a, 1b, and 1c, or an equivalent.

5. Advanced French Composition and Conversation.—Open to those who have taken Course 4 or an equivalent.

Spanish

6a. Elementary Spanish.—This course is intended for beginners. The text-book used will be Hills and Ford's Spanish Grammar (D. C. Heath & Co.).

6b. Elementary Spanish.—A continuation of course 6a. The text-books used will be Hills and Ford's Spanish Grammar; Ramsey's Elementary Spanish Reader (Henry Holt & Co.); Dent's First Spanish Book (London, J. M. Dent & Co.).

6c. Elementary Spanish.—A continuation of course 6b. The text-books used will be the same as those used in Course 6b. (Offered provisorily).

Italian

7a. Elementary Italian.—This course is intended for beginners. The text-book used will be Grandgent's Italian Grammar (D. C. Heath & Co.).

7b. Elementary Italian.—A continuation of course 7a. The text-books used will be Grandgent's Italian Grammar; Bowen's First Italian Readings (D. C. Heath & Co.); Pictorial Italian Course (London, Modern Language Press).

7c. Elementary Italian.—A continuation of course 7b. The text-books used will be the same as those used in course 7b with the addition of Manzoni's I Promessi Sposi (D. C. Heath & Co.).

B. Primarily for graduate students

French

8. Moliere.—The classic period. Given in 1913.

9. Voltaire.—The revolutionary period. Given in 1914.

10. Victor Hugo.—The romantic period. Given in 1915.

11. Rabelais.—The period of the Renaissance and Reformation. Given in 1916.

12. Old French.—In this course the aim is the acquisition of a reading knowledge of Old French. The laws governing the development of Popular Latin to French will also be studied. The books used will be Bourciez' Phonétique française (Paris, Klincksieck); Paris's Extraits de la Chanson de Roland (Hachette et Cie); Clédat's edition of the Chanson de Roland (Garnier frères); Paris and Langlois' Chrestomathie du moyen âge (Hachette et Cie). Students will be expected to read outside the class Paris's La Littérature française au moyen âge (Hachette et Cie). This course is to extend throughout three consecutive summer terms.

In 1914 the course will consist of lectures introductory to the study of Old French phonology, and the reading of the Chanson de Roland in the two editions above mentioned. Some acquaintance with Latin is presupposed.

Italian

13. Dante, La divina commedia.—L'Inferno. Given in 1916.

For graduate courses in French the prerequisite is four years of this language or an equivalent and a general introductory course in the history of French literature. Students who have not had the latter course will be requirel to make up the deficiency by means of assigned outside reading.

Candidates for the master's degree in French will take all the French courses in group B, and, besides, Courses 3, 4, and 5 in group A. Candidates for the master's degree in Romance Languages will take all the courses in group B, and in addition, 6a, 6b, and 6c, or 7a and 7b, and 7c, in group A.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

WILLIAM EMANUEL WALZ, A. M., LL. B., LITT. D.
DEAN — *Professor of Law*

EDGAR MYRICK SIMPSON, A. B. — *Professor of Law*

GEORGE HENRY WORSTER, LL. M. — *Associate Professor of Law*

BARTLETT BROOKS, A. B., LL. B. — *Assistant Professor of Law*

LUCILIUS ALONZO EMERY, A. M., LL. D., Ex-Chief Justice of the Supreme Judicial Court of Maine
Lecturer on Roman Law and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D., Member of the Massachusetts Bar and of the United States Supreme Court Bar
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
Lecturer on Admiralty Law

ISAAC WATSON DYER, A. B.
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

JOHN ROGERS MASON, A. M., LL. B. *Lecturer on Bankruptcy Law*

CHARLES JOHN DUNN — *Lecturer on Maine Practice*

HENRY BURT MONTAGUE, LL. M.
Lecturer on Practice and History of Law

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies the Isaac H. Merrill building, now Stewart Hall, purchased by the University in 1911, corner Union and State Streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains over 3,700 volumes, including the reports of the Federal Courts, and of the Supreme Courts of the United States, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and Ohio; and the Court of Appeals of New York; the New York Common Law and Chancery Reports; the American Decisions, American Reports, and American State Reports; the complete National Reporter System; the Lawyers' Reports Annotated; the English Reports, full verbatim reprint; the English Ruling Cases; and the American Digest; all the important law Encyclopaedias; and a considerable number of text-books.

Admission

The College of Law admits college graduates and such graduates of secondary institutions as are able to show the possession of fourteen units obtained in any regular course of study in an approved school. For further information as to admission see page 49.

Intended Increase of Entrance Requirements

In harmony with the greater demands made by the legal profession and the public, and in recognition of the fact that university standards throughout the country are being gradually raised, it is intended in course of time to go beyond these requirements, and, in addition to the high school education prescribed, two years college work may be required as a preliminary preparation of all candidates for the law degree.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other law schools of good standing are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices otherwise qualified are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the curriculum.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, on presentation of their certificates of admission to the bar, at the beginning of the fall term, while graduate students may take a curriculum leading to the degree of Master of Laws.

Methods of Instruction

The College is not committed exclusively to any one method of instruction. It recognizes the great value of lectures by able men, and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle" may, perhaps, adequately indicate the standpoint of the College in the matter of method.

Particular stress is placed upon the practice court, which is held once a week as a part of the work of the College, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorties cited, are submitted to the presiding judge.

The aim and spirit of the College are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Curriculum

The curriculum covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week.

Degrees

At the completion of the three years curriculum the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis and examination at the College, the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the curriculum leading to the Master's degree.

COURSES OF INSTRUCTION

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Agency.—Text-book, Huffcut's Cases on Agency. *Three hours a week.* Spring term. Associate Professor Worster.

3. Bankruptcy.—Lectures. *Two hours a week.* Winter term. Mr. Mason.

4. Brief Making and the Use of Law Books.—Text-book, Brief Making and the Use of Law Books. *One hour a week.* Fall term. Professor Walz.

5. Carriers.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

6. Carriers.—A continuations of Course 5. *Three hours a week.* Winter term. Professor Simpson.

7. Common Law Pleadings.—Lectures. *Two hours a week.* Winter term. Mr. ———.

8. Common Law Pleading.—A continuation of course 7. *One hour a week.* Spring term. Mr. ——.

9. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

10. Constitutional Law.—Boyd's Cases. *Two hours a week.* Spring term. Associate Professor Worster.

11. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Assistant Professor Brooks.

12. Contracts.—A continuation of course 11. *Three hours a week.* Winter term. Assistant Professor Brooks.

13. Contracts.—A continuation of course 12. *Two hours a week.* Spring term. Assistant Professor Brooks.

14. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

15. Criminal Law.—A continuation of course 14. *Three hours a week.* Spring term. Professor Simpson.

16. Cross-Examination.—Lectures. Mr. ——————

17. Damages.—Beal's Cases on Damages. *Three hours a week.* Winter term. Associate Professor Worster.

18. Domestic Relations. Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

19. Equity Jurisprudence.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz.

20. Equity Jurisprudence.—A continuation of course 19. *Three hours a week.* Winter term. Professor Walz.

21. Equity Pleading.—Shipman on Equity Pleading. *Three hours a week.* Spring term. Assistant Professor Brooks.

22. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

23. Evidence.—A continuation of course 22. *Three hours a week.* Winter term. Professor Simpson.

24. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

25. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

26. Federal Jurisdiction and Procedure.—Lectures. Mr. Dyer.

27. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

28. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

29. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

30. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

31. Insurance.—Woodruff's Cases. *Three hours a week.* Spring *term.* Associate Professor Worster.

32. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

33. Legal Ethics.—Code of American Bar Association. *One hour a week.* Spring term. Professor Walz.

34. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Dunn.

35. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

36. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

37. Negotiable Paper.—Colson-Huffcut on Negotiable Paper. *Two hours a week.* Winter term. Assistant Professor Brooks.

38. Negotiable Paper.—A continuation of course 37. *Three hours a week.* Spring term. Assistant Professor Brooks.

39. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

40. Private Corporations.—Wilgus's Cases. *Four hours a week.* Fall term. Associate Professor Worster.

41. Private Corporations.—A continuation of course 40. *Three hours a week.* Winter term. Associate Professor Worster.

42. Private Corporations.—Lectures. Mr. Dyer.

43. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

44. Real Property.—Tiffany on Real Property. *Four hours a week.* Fall term. Professor Simpson.

45. Real Property.—A continuation of course 44. *Three hours a week.* Winter term. Professor Simpson.

46. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

47. Roman Law.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

48. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Associate Professor Worster.

49. Sales.—A continuation of course 48. *Two hours a week.* Winter term. Associate Professor Worster.

50. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Associate Professor Worster.

51. Suretyship.—A continuation of course 50. *Two hours a week* Winter term. Associate Professor Worster.

52. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

53. Torts.—A continuation of course 52. *Three hours a week.* Winter term. Professor Walz.

54. Torts.—A continuation of course 53. *Two hours a week.* Spring term. Professor Walz.

55. What to do in Court.—Lectures. *About ten hours.* Fall or spring term. Ex-Chief Justice Emery.

56. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

THE COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

HAROLD SHERBURNE BOARDMAN, C. E.
Professor of Civil Engineering
DEAN
*WILBUR FISKE JACKMAN, B. S., PH. C. *Professor of Pharmacy*
ARTHUR CRAWFORD JEWETT, S. B.
Professor of Mechanical Engineering
CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing
CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
WILLIAM EDWARD BARROWS, E. E.
Professor of Electrical Engineering
WILLIAM AMBROSE JARRETT, PHAR. D.
Acting Professor of Pharmacy
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
PAUL LEONARD BEAN, C. E.
Associate Professor of Civil Engineering
ALBERT THEODORE CHILDS, E. E.
Associate Professor of Electrical Engineering
ARCHER LEWIS GROVER, B. S. *Associate Professor of Drawing*
LLOYD MEEKS BURGHART, M. A. *Assistant Professor of Chemistry*
JULIUS ERNEST KAULFUSS, B. S.
Assistant Professor of Civil Engineering

*Absent on leave from September 1, 1913, to September 1, 1914

CARL HENRY LEKBERG, B. S.
Assistant Professor of Mechanical Engineering
LAWRENCE BOYLSTON CHAPMAN, B. Sc.
Assistant Professor of Mechanical Engineering
EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*
CHARLES JENKINS CARTER *Instructor in Machine Tool Work*
ALBERT GUY DURGIN, M. S. *Instructor in Chemistry*
WALTER ELWOOD FARNHAM *Instructor in Drawing*
ERNEST CONANT CHESWELL *Instructor in Electrical Engineering*
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
ALPHEUS CROSBY LYON, B. S. *Instructor in Civil Engineering*
CHARLES BROWN CLEAVES, B. S. *Instructor in Drawing*
RAYMOND HARMON ASHLEY, PH. D. *Instructor in Chemistry*
WALTER HINES NASON, B. S. *Instructor in Civil Engineering*
ROBERT AUSTIN PINHKAM, B. S.
Instructor in Electrical Engineering
JAMES NEWELL STEPHENSON, M. S. *Instructor in Chemistry*
ELWOOD WHITNEY JENNISON, B. S.
Instructor in Mechanical Engineering

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, in various branches of engineering, and in pharmacy. The number of hours required for graduation in this college is one hundred and fifty. In such technical curricula it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the curricula described below is given a tabulated statement of the subjects pursued and the amount of work required. The College comprises:

Chemical Engineering Curriculum
Chemistry Curriculum
Civil Engineering Curriculum
Electrical Engineering Curriculum
Mechanical Engineering Curriculum
Pharmacy Curriculum

At graduation in any of these curricula the student receives the degree of Bachelor of Science. The diploma indicates which curriculum has been completed.

Chemical Engineering Curriculum

In view of the rapid development of the application of chemistry in manufacturing, this curriculum is offered to furnish training in engineering together with specialization in chemistry. The first two years are almost identical with those under the chemical curriculum, but in the junior and senior years the student takes the fundamental courses in mechanical and electrical engineering, where, in the chemistry curriculum, the student takes subjects having a biological aspect. The training is thus essentially chemical, and the graduates are primarily chemists having a good knowledge of mechanical and electrical engineering. Such students will be prepared to enter the profession of chemical engineering and to occupy positions in the manufacturing establishments such as metallurgical works, bleacheries, dye houses, chemical plants, gas works, sugar refineries, pulp and paper mills, etc.

Pulp and Paper Chemistry

Students wishing to specialize in pulp and paper work will substitute in part for courses Chemistry 13, 19, 25, 29a, 29b and 33 given below courses in pulp and paper chemistry (Chemistry 35, 36, 37, and 38), given by this department, a course on wood identification (Biology 21) and courses in forestry (Forestry 1 and 5).

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3	3	English 4	3
German 1a or French 3a	3	German 1b or French 3b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
English 1a[1]	1	Chemistry 7, 3 and †4	5
Mathematics 22	3	English 1b[1]	1
Mechanical Engineering 1b, *4	1½	Military 1, *3	1
Military 1, *3	1	Modern Language	2
Modern language	3	Physics 2	3
Physics 1	5	Physics 5, *5	2
	19½	Physics 13b	2
			21

JUNIOR YEAR

Chemistry 8	3	Chemistry 32b	2
Chemistry 18, †8	4	Chemistry 19, †8	4
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 9, †4	2	Chemistry 13, †3	1½
Chemistry 29a	2	Mechanical Engineering 10	2
Mechanical Engineering 26, †3	1½	Mechanical Engineering 2, *4	1½
Physics 11, *7½	3	Electrical Engineering 10b	2
	18½	Elective	1
			17

SENIOR YEAR

Chemistry 24a	2	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 12, †6	3	Chemistry 28, †2	1
Chemistry 33 or Geology 6	2	Chemistry 29b	2
Electrical Engineering 10a	3	Chemistry 25, †8	4
Electrical Engineering 11a, †4	2	Elective	3
English 29	2		17
	17		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Chemical Engineer.

Chemistry Curriculum

This curriculum is designed to give the student not only a thorough technical training, but also the broadness of education which will enable him readily to undertake the great variety of problems which naturally present themselves to a chemist. It differs from the chemical engineering curriculum in that in the last two years the student takes courses having a biological aspect (bacteriology, biological chemistry, and agricultural analysis) rather than those of an engineering type. The curriculum is a broad one and, when completed, it prepares the student to teach, or for the profession of chemist in experiment stations, food laboratories, chemical, fertilizer and tanning plants; metallurgical, rubber and electrical machinery manufactories; and the general consulting and analytical work of a professional chemist.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3	3	English 4	3
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 5	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Chemistry 14, †10	5	Chemistry 16, †10	5
Chemistry 9, †4	2	Chemistry 7, 3 and †4	5
English 1a[1]	1	English 1b[1]	1
Mathematics 22a	3	Modern Language	2
Modern Language	3	Military 1, *3	1
Military 1, *3	1	Physics 2	3
Physics 1	5	Physics 5, *5	2
	20		19

JUNIOR YEAR

Biological Chemistry 1	5	Agricultural Chemistry 4, †10	5
Chemistry 8	3	Bacteriology 1, †6	3
Chemistry 32a	3	Chemistry 26, †6	3
Chemistry 29a	2	Chemistry 32b	2
Chemistry 18, †8	4	Modern Language	2
Modern Language	3	Elective	4
	20		19

SENIOR YEAR

Chemistry 12, †6	3	Chemistry 24b	2
Chemistry 23	3	Chemistry 22, †10	5
Chemistry 24a	2	Chemistry 29b	2
Chemistry 19, †8	4	Chemistry 28, †2	1
Chemistry 33 or Geology 6	2	Chemistry 25, †8	4
English 29	2	Elective	3
Elective	1		17
	17		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of

Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis, and proofs of professional work, he may receive the degree of Chemical Engineer.

Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college curriculum to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The endeavor is made to impress upon the mind of the student that the granting of his bachelor's degree does not make him an engineer. It simply indicates that he has received the technical mental training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engneering practice and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and those engaged in practical work. These lectures tend to increase the interest of the student and to bring him in touch with men outside of his own institution.

Wingate Hall, in which the department of Civil Engineering is located, contains recitation rooms, designing rooms, testing laboratories, drawing rooms, instrument rooms, and a filing and reference room, and is well equipped with apparatus.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. At the beginning of the fourth year an opportunity is offered to specialize slightly along one of three lines. The first, called Option 1, consists of work in

hydraulic engineering and electrical transmission, the second, Option 2, consists of work in railroad engineering, while Option 3 includes work in both railroad and highway engineering.

The following outline constitutes the regular four years curriculum. Certain general subjects which are given as requirements may, on presentation of reasons satisfactory to the head of the department, be omitted and others substituted.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3	3	English 4	3
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Civil Engineering 1a, 2a	2½	Civil Engineering 2b, 2c	2
Drawing 3, *6	2	Civil Engineering 3, 4a	3
English 1a[1]	1	Drawing 4, *6	2
Mathematics 7	5	English 1b[1]	1
Military 1, *3	1	Mathematics 8	5
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	19½	Physics 5, *5	2
			21

JUNIOR YEAR

Civil Engineering 6	2	Civil Engineering 20	2
Civil Engineering 4b, 4c, *6	2	Civil Engineering 9a	2
Civil Engineering 5	2	Civil Engineering 10	3
Economics 1a	2	Civil Engineering 21	3
Geology 6	2	Economics 2a	2
Mechanics 5	5	Mechanics 6	5
Mathematics 10	3	Mechanical Engineering 25, †2	1
Physics 9, *2½	1		18
	19	* Civil Engineering 9b	2

SENIOR YEAR

Civil Engineering 12	3	Civil Engineering 13 a	3
Civil Engineering 26	1	Civil Engineering 13b	2
Civil Engineering 14, †9	4½	Civil Engineering 15, †6	3
Civil Engineering 16 and 11a (Option 1)	4	Civil Engineering 17 and Electrical Engineering 12b (Option 1)	5
Civil Engineering 10 and 11b (Option 2)	4	Civil Engineering 24 and 25 (Options 2 and 3)	5
Civil Engineering 8 and 11b (Option 3)	4	Civil Engineering 18	1
History 5	2	Economics 6	3
English	2		
	16½		17

*Taken after Commencement.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

Electrical Engineering Curriculum

This curriculum is intended to provide the student with a thorough understanding of the underlying principles of electrical engineering and to develop an ability to solve problems of an engineering nature from commercial as well as technical premises. To accomplish this, the student first studies the various electrical laws and methods of electrical measurements and correlates them with various laws previously assimilated in the study of physics and mathematics. These studies are followed by more advanced courses involvng the fundamental electrical laws and theories and showing their application to the design, operation, and performance of electrical apparatus such as is used in the generation of electrical energy or in transforming electrical energy into mechanical energy for the various commercial requirements.

The methods of instruction consist of recitations, lectures, problems, laboratory tests, and drawing room work in design. It is the endeavor of the curriculum to acquaint the student with contempory engineering practice and, by persistent association of abstract analysis with practical problems, to equip him with the fundamentals of a successful career. Stress is laid upon the systematic reading of technical periodicals and the acquirement of a reference library. Effort is made to have lectures by active engineers and alumni following their profession, thus bringing the student into more intimate contact with the engineering world.

In addition to the purely electrical subjects, the student takes the customary work in mathematics, physics, mechanics, shop, drawing, and allied engineering courses, together with the cultural subjects enumerated below.

The following courses are offered in the junior and senior years, two of which are required for a degree:—

Ee. 13b.	Electrical railway engineering	2
Ee. 14b.	Illuminating engineering	2
Ee. 15b.	Telephone engineering	2
Ps 10.	Theory of electricity and magnetism	2
Ps 12.	Theory of electricity and magnetism	2

The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible, and consists essentially of a 20 kilowatt electrical substation, converting from a three phase, 60 cycle, 115 volt, alternating current system, to direct current, by means of rotary converters and belted alternating current motors driving direct

current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressure for experimental work, and voltages for operating two and three-phase rotary converters, a self-starting rotary converter, a three-phase generator, a three-phase revolving field synchronous motor, a three phase variable speed induction motor, a single-phase synchronous motor, a single-phase self-starting induction motor, direct current generators and motors, and laboratory telephone equipment.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3 and 3p	4	English 4 and 4p	4
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	19½		20

SOPHOMORE YEAR

Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1b, *4	1½	Mechanical Engineering 2, *4	1½
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	18½	Physics 5, *5	2
			20½

JUNIOR YEAR

Elements of Elec. Eng. Ee 1a.	3	Elements of Elect. Eng. Ee 1b	3
Illuminating Eng. Ee 14a or	2	Elect. Laboratory, Ee 2b †4...	2
Electricity & Magnetism Ps 10		Machine Work, Me 5b *4	1½
Machine Work, Me 5b *4	1½	Machine Design, Me 8	3
Plane Surveying, Ce 1b	2	Steam Engineering, Me 10 ...	3
Field Work, Ce 2a *6	½	Mechanics, Md 6	5
Mechanics, Md 5	5	Money & Banking, Ec 2a	2
Elect. Measurements, Ps. 11 *7½	3		
Political Economy, Ec 1a	2		
	19		19½

SENIOR YEAR

Alternating Currents, Ee 3a..	3	Adv. Alt. Currents, Ee 3b	4
Electrical Design, Ee 4a	2	Technical Reviews, Ee 4b	1
Design of Elect. Mach., Ee 5a, †4	2	Electrical Laboratory, Ee 6b †4	2
Electrical Laboratory, Ee 6a, †4	2	Elect. Eng. Practice, Ee 8b *4	1½
Telephone Engineering, Ee 15b or	2	Elect. Railway Eng'g, Ee 13b..	2
Electricity & Magnetism, Ps 12		Elect. Power Plant Eng'g Ee 16b	2
Steam Engineering, Me. 11 ...	3	Mechanical Eng'ing Me. 19 *3	1
Mechanical Laboratory, Me 26 †3	1½	Business Law, Ec 6	3
Foundations, Ce 22	1		14½
Hydraulics, Ce 23	2		
	18½		

At graduation the students receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in

residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all works involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installaton of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power; the equipment of railways, and similar work.

The Mechanical Engineering curriculum is arranged to fit men as well as possible in four years' time to enter any of these lines of work. It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught mainly by recitations, based upon carefully chosen texts which are supplemented or brought down to date, where necessary, by explanations or illustrative examples on the part of the instructor. Numerous problems are assigned for work outside the class-room to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation, and testing of apparatus by direct contact with it. In the drawing rooms, application of theories to work in design is taught, together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice

in the electrical laboratory. Sufficient time is devoted to recitation and field work in surveying to give familiarity with instruments and methods. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
Drawing 1, *6	2	Drawing 2 *6	2
English 3	3	English 4	3
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	18½		19

Sophomore Year

Subject	Hours	Subject	Hours
Drawing 3, *6	2	Drawing 4, *6	2
English 1a[1]	1	English 1b[1]	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engneering 1a, *6	2	Mechanical Engineering 2, *4	1½
Military 1, *3	1	Mechanical Engineering 4	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19	Physics 2	3
		Physics 5, *5	2
			20½

JUNIOR YEAR

Subject	Hours	Subject	Hours
Mechanical Engineering 24 ...	1	Mechanical Engineering 5a, *6	2
Mechanical Engineering 5a, *6	2	Mechanical Engineering 8	3
Mechanical Engineering 9 ...	2	Mechanical Engineering 10 ...	3
Mechanical Engineering 3, *4..	1½	Mechanical Engineering 15a †2	1
Civil Egineering 1b	2	Mechanical Engineering 19, *3	1
Civil Engineering 2a	½	Electrical Engineering 10a	2
Mechanics 5	5	Mechanical Engineering 27 ...	1
Physics 9, *5	2	Mechanics 6	5
Economics 1a	2		
Physics 19a	½		
	18½		18

SENIOR YEAR

Subject	Hours	Subject	Hours
Mechanical Engineering 11....	3	Mechanical Engineering 7	2
Mechanical Engineering 12, *6	2	Mechanical Engineering 15c, 4	2
Mechanical Engineering 15b, 2	1	Mechanical Engineering 16 ...	2
Mechanical Engineering 18, *6	2	Mechanical Engineering 17 *6	2
Civil Engneering 22	1	Mechanical Engineering 13 ...	2
Civil Engineering 23	2	Mechanical Engineering 20 ...	1
Electrical Engineering 10b ...	2	*Economies 6	3
Electrical Engineering 11a, 4..	2	Electrical Engineering 10c ...	2
Mechanical Engineering 14 ...	2	Electrical Engineering 11b	1½
English	2	Thesis	
	19		17½

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

**Substitution may be offered for this course if approved by the major instructor.

Pharmacy Curricula

The Department of Pharmacy offers two curricula, one of four years and one of two years.

The four years curriculum is offered in response to a demand for a combined collegiate and technical training for those who design to practice pharmacy. It aims therefore to combine general culture studies with a training in those sciences fundamental to technical pharmacy, to the end that the pharmacist may be equipped culturally and technically to fulfill the increased demands and responsibilities of his exacting calling. Hence while this curriculum includes the appropriate sciences and laboratory courses, it also includes cultural courses in modern languages, history, philosophy, and economics. While in the latter three subjects particular courses are not specified, a minimum number and proper sequence of such courses are required.

Those who intend to prepare for pharmaceutical work are urged to consider carefully the superior advantages of this curriculum. The increasing importance of the chemical, biological, and sanitary sciences, and of the pharmacist's relation to them, emphasized by the era of food and drug legislation now upon us, points out at once the path of new duty and of enlarged opportunity to those fitted to enter. To the unfit, the new duty remains, without the enlarged opportunity.

Instruction in pharmaceutical studies is given by lectures, recitations, and tests, supplemented by work in the laboratories of chemistry, biology, and pharmacy. Thirty credits are required for graduation.

The library contains valuable reference literature in chemistry, pharmacy, and allied sciences, and the leading scientific and technical journals.

Requirements for Graduation, Four Years Curriculum

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 4, †4	2
English 3 and 3p	4	English 3 and 4	4
French 3a or German 1a	3	French 3b or German 1b	2
Mathematics 2	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	17½		18

SOPHOMORE YEAR

Biology 1	5	Biology 1	5
Chemistry 14, †8	4	Chemistry 7	5
English 1a[1]	1	English 1b[1]	1
Military 2, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 5, *5	2
	19		19

JUNIOR YEAR

Bacteriology 2	1	Bacteriology 1, †6	3
Biological Chemistry 1	5	Chemistry 16	5
Biology 10	4	Chemistry 19f, †2	1
Chemistry 8	3	Chemistry 31	2
Pharmacy 2	5	Lab. Biol. Chem. 2, †6	3
Pharmacy 5	2	Pharmacy 6	4
		Electives	2
	20		20

SENIOR YEAR

Chemistry 19d †4	2	Pharmacy 4	5
Pharmacy 3, †12	6	Pharmacy 9, †3	1½
Pharmacy 7	3	Pharmacy 10, †10	5
Elective	7	Pharmacy 11	3
		Elective	4
	18		18½

From courses in history, philosophy, and economics, a total of at least five hours must be chosen.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

Two Years Curriculum

This curriculum is designed for those who, for lack of time or for other reasons, are unable to take the curriculum of four years. The more general educational studies of the full curriculum are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The curriculum corresponds, in general, to the usual full curriculum of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this curriculum does not warrant extending to other than advanced students the privilege of electives.

Requirements for Graduation

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1	2	Botany 13	3
Chemistry 14, †16	8	Chemistry 2	3
Pharmacy 1	5	Chemistry 7	5
Pharmacy 5	2	Chemistry 16, †10	5
		Pharmacy 6	4
	17		20

SECOND YEAR

Chemistry 8	3	Bacteriology 1, †6	3
Pharmaceut. Histol. 14	3	Chemistry 19f	1
Pharmacy 2	5	Chemistry 31	2
Pharmacy 3, †12	6	Pharmacy 4	5
Pharmacy 7	3	Pharmacy 9, †3	1½
		Pharmacy 10, †10	5
	20	Pharmacy 11	3
			20½

Students who satisfactorily complete this curriculum receive the degree of Pharmaceutical Chemist.

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation.

CHEMISTRY

PROFESSOR MCKEE; ASSOCIATE PROFESSOR EASLEY; ASSISTANT PROFESSOR BURGHART; MR. DURGIN; MR WHITTIER; DOCTOR ASHLEY; MR. STEVENSON.

For undergraduates only

1a. GENERAL CHEMISTRY.—This course deals with the general principles of the science. Lectures and recitations. Open to students who have taken chemistry in preparatory school. *Two hours a week.* Fall semester. To be accompanied by Course 3. Courses 1a, 2a, 3, and 4; or 1b, 2b, 3, and 4 constitute the first year's work in chemistry.

2a. GENERAL CHEMISTRY.—This course is a continuation of Course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds, and chemical properties. Lectures and recitations. *Three hours a week.* Spring semester. To be accompanied by Course 4.

1b. GENERAL CHEMISTRY.—A course similar to 1a for those who have had no previous work in chemistry. *Two hours a week.* Fall semester. To be accompanied by Course 3.

2b. General Chemistry.—A course similar to 2a but in continuation of 1a for those who did not take chemistry in the preparatory school. *Three hours a week.* Spring semester. To be accompanied by Course 4.

3. Laboratory Chemistry.—Laboratory work to accompany Course 1. †*Four hours a week.* Fall semester.

4. Laboratory Chemistry.—A continuaton of Course 3 to accompany Course 2. †*Four hours a week.* Spring semester.

5. Organic Chemistry.—An elementary one semester course in organic chemistry. Required of sophomores majoring in agriculture. *Two hours class room and* †*two hours laboratory work a week.* Fall semester.

6. Organic Chemistry.—An elementary course giving in one semester a rapid view of the subject. Students who have sufficient time available are advised to take Courses 7 and 8 instead of this course. No prerequisite other than general chemistry. *Three hours class room and* †*four hours laboratory work a week.* Spring semester.

9. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils, and the common coals. †*Four hours a week.* Fall semester.

13. Descriptive Mineralogy.—The text-book is Moses and Parsons's Elements of Mineralogy. †*Three hours a week.* Spring semester. Not given in 1913-14.

14. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. †*Ten to* †*sixteen hours a week.* Fall semester.

31. Chemical Reactions.—Principles governing chemical reactions; their application to equations; oxidation and reduction. *Two hours a week.* Spring semester.

For graduates and undergraduates

7. Organic Chemistry.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory work. The text followed is Cohen's Theoretical Organic Chemistry. Jones's Laboratory Outline of Organic Chemistry is used for the experimental work. Open to those who have taken qualitative analysis (Course 14). *Three hours class room and †four hours laboratory work a week.* Spring semester.

8. Organic Chemistry.—A continuation of Course 7. The work is chiefly in the aromatic series. *Three hours a week.* Fall semester.

12. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. This course must be preceded by Courses 7 and 8. *†Six hours a week.* Fall semester.

16. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Foulk's Quantitative Chemical Analysis. Open to students who have had Course 14. *†Ten hours a week.* Fall semester.

18. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravimetric and volumetric methods are used. Open to students who have taken Course 16. *†Eight hours a week.* Fall semester.

19. Special Quantitative Methods.—Open to students who have completed Course 16. (a) Water analysis; (b) electroanalysis; (c) assaying; (d) special volumetric analysis; (e) organic analysis; (f) toxicology and urinalysis. Subdivisions a, b, c, and d each require *†four hours a week* Subdivisions e and f each require *†two hours a week.* Fall and spring semesters.

22. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than †ten hours a week* for its completion. Spring semester.

24a. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. As a part of this course an inspection trip is made to manufacturing plants of a chemical nature in New England. The expense of this trip the last few years has varied from $15 to $25 a year. Open to students who have completed Courses 7, 8, 14, and 16. *Two hours a week.* Fall semester.

24b. Industrial Chemistry.—A continuation of Course 24a. *Two hours a week.* Spring semester.

25. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed Courses 16 and 18. †*Eight hours a week.* Spring semester.

26. Physical-Chemical Methods.—The course will include: determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as the refractometer, polariscope, and spectroscope. †*Six hours a week.* Spring semester.

28. Dyeing.—The practical application of dyes to cotton, wool, and silk. †*Fifteen hours a week* for two weeks.

29a. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, propertes, and alloys of iron. Open to students who have completed Courses 1, 2, 3, and 4. *Two hours per week.* Fall semester.

29b. Metallurgy of the Metals other than Iron.—A course similar to 29a. The metals other than iron and steel are studied. Open to students who have completed Course 14. *Two hours a week.* Spring semester.

32a. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physcal chemistry in its several branches. Lectures and recitatons. Open to students who have completed Chemistry 16, Mathematics 22, and Physics 1, 2, and 5. *Three hours a week.* Fall semester.

32b. Physical Chemistry.—A continuation of Course 32a. *Two hours a week.* Spring semester.

35. Paper.—A lecture course on paper and the various processes of present day paper making. Open to those who have completed or are taking Course 14. *Two hours a week.* Fall semester.

36. Paper Manufacture and Testing.—A laboratory course in which paper machinery will be studied and paper of various kinds will be made and tested. This course should be preceded by course 35. †*Four hours a week.* Spring semester.

37. The Making of Paper Pulp.—A laboratory course in paper pulp mill chemistry. The work taken up is that ordinarily falling to the chemist of a pulp mill of either the soda, sulphite or sulphate type. Open to students who have completed Course 16. †*Four hours a week.* Fall semester.

38. Paper Pulp.—A lecture course on the processes of manufacturing paper pulp. The uses of pulp other than in the manufacture of paper will also be discussed. *Two hours a week.* Spring semester.

Primarily for graduates

15. Qualitative Analysis.—This course is similar to Course 14 but deals with organic compounds. It must be preceded by Courses 7 and 8. Noyes and Mulliken's Class Reactions and Identifications of Organic Substances is used as a guide. †*Four hours a week.* Fall semester.

23. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. Open to students who have completed Courses 7 and 8. *Three hours a week.* Fall semester.

33. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. Open to students who have completed Courses 32a and 32b. *Two hours a week.* Fall semester.

Laboratory fees covering general chemicals, gas, etc., are as follows: Courses 3, 4, 14, 16, and 22, $5; Courses 6, 7, 12, and 18, $3; Courses 13, 15, 25, 26, 28, 36, 37, and each part of 19, $2.

Broken apparatus and special chemicals are paid for at the chemical supply room by use of a "breakage card" obtained from the Treasurer's office. The portion of this card which has not been used will be redeemed at the end of the semester

For courses in biological and agricultural chemistry see the description of courses given by the department of Biological and Agricultural Chemistry.

Summer Term

Professor McKee; Associate Professor Easley; Mr. Whittier

1. General Inorganic Chemistry.—A review of the class-room work of the freshman year. Experimental lectures and recitations.

2. Inorganic Preparations.—A laboratory course in the purification and preparation of typical inorganic compounds. *Ten hours of laboratory work a week.*

3. Methods of Laboratory Manipulation.—Glass bending, blowing, cutting, boring and annealing; sealing of wires into glass and repair of glass apparatus; soldering of the more common metals; methods of labeling; stains, varnishes, and lacquers for wood and metal apparatus; setting up of apparatus. *Six hours of laboratory work a week.*

4. Physical Chemistry.—Lectures on selected chapters of the subject touching upon the following phases: molecular structure, the mass law, the theories of solution and their applications, especially along the line of electro-chemistry.

5. Organic Chemistry.—This is a general introductory course in the subject open to those who have had the freshman course in general chemistry or its equivalent.

6. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determination of the proximate constituents

and heating values of the more common fuels. *Ten hours of laboratory work each week.*

7. Laboratory work in general chemistry, qualitative analysis quantitative analysis and organic chemistry will be arranged according to the needs of those attending the Summer Term.

Graduate Work.—Attention should be called to the courses that can be taken for graduate credit by those who already have a bachelor's degree (Courses 2, 3, 4, 5, and several parts of 7). It is the custom of the department to vary from year to year the courses offered in such a way that a student attending several successive summers will be able to complete the work necessary for a master's degree. The fact that a considerable part of this work is of a laboratory character enables it to be varied in order and character to suit the needs of the individual student.

CIVIL ENGINEERING

Professor Boardman; Professor Brown; Associate Professor Bean; Assistant Professor Kaulfuss; Mr. Lyon; Mr. Nason

For undergraduates only

1a. Plane Surveying.—A course on the general principles of plane surveying; instruments, their adjustments and uses; the variation of the magnetic needle and the determination of the true north; direct leveling; land surveying computations. *Three hours a week.* Last nine weeks. Fall semester.

1b. Plane Surveying.—A course similar to 1a, given to students in the departments of Mechanical and Electrical Engineering. *Two hours a week.* Fall semester.

2a. Field Work in Surveying.—The use of the chain, compass, transit, and level. This course is given before the student has received class-room instruction, and is designed to make him familiar with the uses of the instruments, such as running lines, turning angles, reading verniers and rods, etc. Required of all students in the departments of

Civil Engineering, Mechanical Engineering, Electrical Engineering, and Forestry. **Six hours a week.* First nine weeks. Fall semester.

2b. Plotting.—This course consists chiefly of map drawing from field notes, by the different methods in common use. Course 2a is prerequisite. **Six hours a week.* First twelve weeks. Spring semester.

2c. Field Work in Surveying.—A continuation of Course 2a. This course consists of original surveys, problem work, adjustment of instruments, note keeping, etc. Course 2a is prerequisite. **Six hours a week.* Last six weeks. Spring semester.

3. Railroad Curves.—A course of recitations and lectures investigating the geometry of railroad curves, switches and turnouts. Course 1a or 1b is prerequisite. *Three hours a week.* First twelve weeks. Spring semester.

4a. Railroad Field Work.—This course consists of practice in running in railroad curves and turnouts. A general application of the theories of Course 3. Courses 2a and 3 are prerequsite. †*Six hours a week. Last six weeks.* Spring semester.

4b. Railroad Field Work.—The survey for a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. Courses 2c, 3 and 4a, or Courses 2c and 27 are prerequisite. **Six hours a week.* First nine weeks. Fall semester.

4c. Railroad Office Work.—The office work of mapping the notes taken in Course 4b, including the calculation of the earth work. Courses 2b and 4b are prerequisite. **Six hours a week.* Last nine weeks. Fall semester.

5. Municipal Engineering.—The construction and improvement of city streets and pavements under different conditions of climate and traffic; general principles of sewer design; a study of city sanitation, water supply and sewage disposal. Course 1a or 1b is prerequisite. *Two hours a week.* Fall semester.

6. Railroad Construction.—Recitations and lectures on the field and office practice of staking out and computing amount of excavation and fill; borrow-pits; haul; methods and materials of railroad construction; subgrade; roadbed; track and track work. Course 3 is prerequisite. *Two hours a week.* Fall semester.

7. Thesis Work.—The study of and report upon some original investigation, or design. *Time to be arranged.* See regulations regarding degrees.

8. Highway Engineering.—The location, drainage, construction, and maintenance of country roads under various conditions of soil, climate, traffic, etc.; highway economics, legislation and administration. Required of students electing Option 3. Course 5 is prerequisite. *Three hours a week.* Fall semester.

9a. Advanced Surveying.—This course consists of lectures, readings and recitations on the theory of base line measurement, triangulation, precise leveling, topographical surveying, the use of the plane table, and the theory and application of least squares. It is a preparation for Course 9b. Course 4b is prerequisite. *Two hours a week.* Spring semester.

9b. Summer Field Work.—This course consists of the practical application in the field and in the office of the principles given in Course 9a. The work is given during the two weeks following Commencement. Course 9a is prerequisite.

10. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observations; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. *Three hours a week.* Spring semester.

12. Structures.—A continuation of Course 21. The theory of stresses in framed structures, including the plate girder, bridge trusses, and roof trusses; reinforced concrete; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.* Fall semester.

13b. Graphic Statics.—Class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by graphical methods. Course 12 is prerequisite. *Two hours a week.* Spring semester.

20. Masonry Construction.—A course including the discussion of building stone and brick; cement and their tests; mortar; plain and reinforced concrete; piles; foundations; pneumatic caissons; open caissons; bridge piers, and abutments. *Two hours a week.* Spring semester.

21. Structures.—The theory of the simple beam; loads and reactions; vertical shear; bending moment; influence lines. The object of this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, various tables, and the slide rule. Classroom, *Two hours a week.* Drawing room, †*Two hours a week.* Spring semester.

22. Foundations.—Building stones; manufacture of cement; tests of cement; mortar; concrete, both plain and reinforced; piles; foundations; caissons. This is a course of lectures given to students in the departments of Mechanical and Electrical Engineering. *One hour a week.* Fall semester.

23. Hydraulics.—A short course which includes the main principles given in Course 10. Given to students in the departments of Mechanical and Electrical Engineering. *Two hours a week.* Fall semester.

27. Simple Curves and Earthwork.—A lecture course on the theory and practice of simple railroad curves and on the field and office practice of staking out and computing earthwork. Given to students outside of the department of Civil Engineering who desire to take Courses 4b and 4c. Courses 1a and 2a are prerequisites. *One hour a week.* Spring semester.

For graduates and undergraduates

11a. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter. Trips are made to

the United States Geological Survey gaging station, located on the Penobscot River between Howland and West Enfield, where discharge measurements are made. The data thus obtained is used, together with that obtained from the Survey, to plot the rating curve, etc. The measurements taken are reported to the Survey. The expenses of this course are paid by the students. Required of students taking Option 1. Course 10 is prerequisite. †*Four hours a week.* Fall semester.

11b. Hydraulic Field Work.—A short course similar to Course 11a. Required of students taking Options 2 and 3. Course 10 is prerequisite. †*Two hours a week.* Fall semester.

13a. Structures.—A continuation of Course 12. This course includes a study of the higher types of structures. *Three hours a week.* Spring semester.

14. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. Course 21 is prerequisite. †*Nine hours a week.* Fall semester.

15. Designing.—A continuation of Course 14. Course 12 is prerequisite. †*Six hours a week.* Spring semester.

16. Hydraulic Engineering.—Rainfall, evaporation, and stream flow; the development and utilization of water power; the development of the modern turbine. Lectures and recitations. Required of students electing Option 1. Course 10 is prerequisite. *Two hours a week.* Fall semester.

17. Hydraulic Engineering.—A continuation of Course 16. Course 11a is also prerequisite. *Three hours a week.* Spring semester.

18. Road Materials Laboratory.—Physical and chemical tests of sand, gravel, stone, brick, wood block, bituminous compounds, and other road materials. Courses Civil Engineering 5 and Biological Chemistry 6 are prerequisites. Optional for 1913-14. *Three hours per week.* Spring semester.

19. Railroad Engineering.—A course discussing the economics of railroad location and operation. The railroad corporation, its rights and limitations; traffic; operating expenses; the locomotive and its work; distance; curves; grades. Required of students electing Option 2. Course 6 is prerequisite. *Three hours a week.* Fall semester.

24. Railroad Engineering.—A course in railroad design. A map reconnaissance for a railroad about twelve to fifteen miles in length is made, applying the theories of Course 19. The final line is located, profile made, grades established, and drainage areas and culverts calculated. The rails, switch points, frogs, and ties for a turnout are designed. A railroad yard layout is computed and plotted. Required of students electing Option 2 or 3. Courses 4c and 19 are prerequisites. †*Six hours a week.* Spring semester.

25. Railroad Engineering.—A course of lectures and recitations studying various railroad structures; trestles; culverts; grade crossings and elimination; yards and terminals; signals and interlocking; maintenance and betterment work. Required of students electing Option 2 or 3. Course 19 is prerequisite. *Two hours a week.* Spring semester.

26.—Cement Laboratory.—This course consists of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is required of students in Mechanical Engineering and in Civil Engineering. Course 20 is prerequisite for students in Civil Engineering. *The time varies.* Fall semester.

ELECTRICAL ENGINEERING

Professor Barrows; Associate Professor Childs; Mr. Cheswell; Mr. Pinkham

For undergraduates only

1a. Elements of Electrical Engineering.—This course takes up the practical application of laws studied in physics and the fundamental principles of electrical engineering. The work is of the nature of a

text-book course, consisting of recitations and problems. Required of juniors in Electrical Engineering. *Three hours a week.* Fall semester.

1b. Elements of Electrical Engineering.—A continuation of Course 1a, showing the application of the fundamental principles to the construction, operation, and testing of direct current generators and motors and to general engineering problems. Required of juniors in Electrical Engineering. *Three hours a week.* Spring semester.

2b. Laboratory Work.—Electrical measurements, and the operation and testing of direct current generators and motors. This course illustrates the practical application of the work given in Courses 1a and 1b. Required of juniors in Electrical Engineering. The charge for this course is $3.00. †*Four hours a week.* Spring semester.

3a. Elements of Alternating Currents. A study of the effect of alternating currents upon various electrical circuits; voltage, current, and wattage relations in inductive and capacity circuits; application of the fundamental elements of alternating currents to the design, construction and operation of apparatus and machinery; calculations and problems. Required of seniors in Electrical Engineering. *Three hours a week.* Fall semester.

4a. Electrical Design.—A course on the design, construction, and cost of electro-magnets and clutches, electric heating apparatus, direct current generators and motors, and the general features of the design of alternating current machinery: the study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in Electrical Engineering. *Two hours a week.* Fall semester.

4b. Technical Review.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and presents the results to the class; also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in Electrical Engineering. *One hour a week.* Spring semester.

5a. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in Course 4a. Calculations are made for electro-magnetic devices and for direct current generators, involving a knowledge of the fundamental electrical principles of design, the principles of mechanical design, cost of materials and cost of labor and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in Electrical Engineering. †*Four hours a week.* Fall semester.

6a. Laboratory Work.—A continuation of Course 2b, taking up the testing of direct current apparatus and machinery, and alternating current measurements; investigation of power plant equipment and electric lighting. Required of seniors in Electrical Engineering. The charge for this course is $3.00. †*Four hours a week.* Fall semester.

6b. Laboratory Work.—A course showing the practical application of the work done in Courses 3a and 3b, and continuing the laboratory work of Course 6a, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in Electrical Engineering. The charge for this course is $3.00. †*Four hours a week.* Spring semester.

8b. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus and development of original ideas of the student; also for testing, repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in Electrical Engineering. *Seventy-two hours during the senior year.*

9a. Thesis Work.—The designing of electrical apparatus or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in Electrical Engineering. *Fall semester and through the senior year, as required.*

10a. Direct Current Machinery.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of seniors in Mechanical and Chemical Engineering. *Two hours a week.* Spring semester.

10b. Alternating Currents.—A required course for seniors in Mechanical and Chemical Engineering which continues the work taken up in Course 10a. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from the operating engineer's point of view. *Two hours a week.* Fall semester.

10c. Electrical Applications.—The object of this course is to supplement the study of the fundamental electrical principles given in 10a and 10b with the study of the practical applications of electrical machinery to the problems met by the mechanical engineer, such as machine tool drive, crane and hoist work, industrial applications, etc. Required of seniors in Mechanical Engineering. *Two hours a week.* Spring semester.

11a. Laboratory Work.—For mechanical and chemical engineers. Electrical measurements and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in Courses 10a and 10b. The work is arranged for the particular needs of the mechanical engineer. This course is open to civil engineering students who have previously elected one of the preliminary electrical courses. Required of seniors in Mechanical and Chemical Engineering. The charge for this course is $3.00. †*Four hours a week.* Spring semester.

11b. Laboratory Work.—A continuation of 11a involving the operation and testing of alternating current apparatus. Required of seniors in Mechanical Engineering. The charge for this course is $3.00. †*Four hours a week.*

12b. Electrical Generation and Transmission of Power.—A required course for seniors in Option 1 in Civil Engineering, taking up

the elements of electrical measurements, the generation, transmission, and utilization of power, covering the electrical future of water power development. *Two hours a week.* Spring semester.

For graduates and undergraduates

3b. Advanced Alternating Currents.—A continuation of Course 3a, taking up a study of polyphase apparatus in the generation, transmission, distribution, and utilization of power; high voltage transmission systems; engineering applications and practical problems involving the theory and training of the course and the technical ability of the students. Required of seniors in Electrical Engineering. *Four hours a week.* Spring semester.

13b. Electrical Railway Engineering.—A study of the preliminary steps taken in electric railway engineering; the selection of the proper motor equipment for a given class of service; car, bond, and transmission testing. Optional to seniors in Electrical Engineering. *Two hours a week.* Spring semester.

14a. Illuminating Engineering.—A course devoted to the study of the different types of lamps, light, photometry, illumination calculations, and the problems of interior and exterior illumination. Optional to juniors in Electrical Engineering. *Two hours a week.* Fall semester.

15b. Telephone Engineering.—A course dealing with the principles of telephone apparatus and circuits. The different telephone systems, together with party lines, trunk lines, and central station problems are given due consideration. Optional to seniors in Electrical Engineering. *Two hours a week.* Fall semester.

16b. Electrical Power Plants.—This course covers the electrical equipment of the power plant. Particular attention is given to the methods of control, circuit interrupting devices, lightning arresters, and methods of arranging station and substation switch boards. Required of seniors in Electrical Engineering. *Two hours a week.* Spring semester.

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences

MECHANICAL ENGINEERING

Professor Jewett; Assistant Professor Lekberg; Assistant Professor Chapman; Mr. Davée; Mr. Carter; Mr. Jennison

For undergraduates only

1a, Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern woodworking practice, and also to teach him to work from dimensioned drawings. These exercises lead to pattern-making. The pattern work consists of making complete patterns and core boxes from drawings. Required of students in Mechanical Engineering. Charge for materials, $4.00. **Six hours a week.* Fall semester.

1b. Woodworking.—A shorter course than 1a, arranged for students in Electrical Engineering. Required. Charges for materials, $4.00. **Four hours a week.* Fall semester.

2. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in Mechanical and Electrical Engineering. Charge for material, $5.00. **Four hours a week.* Spring semester.

3. Kinematical Drawing.—This course supplements Course 4 which is a prerequisite. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in Mechanical Engineering. **Four hours a week.* Fall semester.

4. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. Required of students in Mechanical and Electrical Engineering. *Three hours a week.* Spring semester.

5a. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Course 2 is a prerequisite. Required of students in Mechanical Engineering. Charge for materials, $5.00. **Six hours a week.* Fall and Spring semesters.

5b. Machine Work.—A shorter course than 5a and 5b, required of students in Electrical Engineering. Course 2 is a prerequisite. Charge for material $5.00. **Four hours a week.* Fall and Spring semester.

6. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with Course 5, ten per cent. of the hours registered for under Course 5 being applied to foundry work.

7. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanism; the Zeuner, Bilgram, and other valve-diagrams are made use of in this connection; this course is given in conjunction with 17; practical problems are solved in the drawing room. Required of students in Mechanical Engineering. *Two hours a week.* Spring semester.

8. Machine Design.—A study of the designing of machines, proportioning of parts for strength and rigidity, etc. Mechanics 5 and 6 are prerequisites. Required of students in Mechanical and Electrical Engineering. *Three hours a week.* Spring semester.

9. Materials of Engineering.—Properties of the metals, timber, rope; protective coatings and preservatives—first half. Graphics—second half. Required of students in Mechanical Engineering. *Two hours a week.* Fall semester.

10. Heat Engineering.—This course deals with the fundamental theories of gases and steam, illustrated by problems of practical form. The laws of thermodynamics; laws of gases; characteristic equations for gases; kinds of expansion and compression; Carnot's cycle; heat quantities in steam; use of the steam tables; steam equations; quality

of steam; calorimeters; entropy. Mathematics 8 and Physics 1 and 2 are prerequisites. Required of students in Mechanical and Electrical Engineering. *Two hours a week.* Spring semester.

11. Heat Engineering.—Types and details of steam boilers, engines, and auxiliary machinery. A consideration of fuels and the chemistry of combustion; efficiency factors of the steam boiler plant; heat losses in steam engines; compound steam engines; refrigeration; gas engine cycles and gas producer principles. For students in Electrical Engineering valve gears is included. Required of students in Mechanical and Electrical Engineering. Course 10 is a prerequisite. *Three hours a week.* Fall semester.

12. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room, with boiler specifications and chimney design. Required of students in Mechanical Engineering. **Six hours a week.* Fall semester.

15a. Mechanical Laboratory.—The calibration of instruments used in engineering testing, followed by the more elementary experimental work. Required of juniors in Mechanical Engineering. The charge for the course is $2.00. †*Two hours a week.* Spring semester.

15b. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, valve settings, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. †*Two hours a week.* Fall semester.

15c. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. †*Four hours a week.* Spring semester.

17. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general machine design; a steam engine is partially designed in the drawing room. Required of students in Mechanical Engineering. **Six hours a week.* Spring semester.

18. Machine Design.—A continuation of Course 8, including the execution of the design of some typical machines. Required of students in Mechanical Engineering. **Six hours a week.* Fall semester.

19. Machine Drawing.—Instruction in modern drafting-room methods, shop terms, etc. The practical application of drawing to use in the construction of machines. Required of students in Mechanical and Electrical Engineering. **Four hours a week.* Spring semester.

20. Heating and Ventilation.—A lecture course. Required of students in Mechanical Engineering. *One hour a week.* Spring semester.

21. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.* Fall and Spring semesters.

22. Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

23. Power Generation and Application.—A course arranged for forestry students to cover fuels, steam boilers, steam and gas engines, locomotives, log haulers, elementary mechanics, principles of beams and columns. *Two hours per week.* Fall semester. Elective.

24. Mechanism of Machines.—Lectures supplementing Course 4. Required of students in Mechanical Engineering. *One hour a week.* Fall semester.

25. Strength of Materials by Test.—A course in the mechanical laboratory for students in Civil Engineering. The charge for the course is $2.00. †*Two hours a week.* Spring semester.

26. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the students in Electrical Engineering. The charge for the course is $2.00. †*Three hours a week.* Fall semester.

27. Graphics.—A course given in connection with Course 19. *One hour a week.* Spring semester.

For graduates and undergraduates

13. Hydraulic Machinery.—A study of hydraulic turbines, water wheels, and other features of hydraulic power plant development. *Two hours a week.* Spring semester.

14. Factory Organization and Management.—A course of lectures and assigned reading upon various styles of organization for industrial enterprises; the planning and equipping of factory plants; systems of management, etc., followed by a consideration of factory design and construction. Required of students in Mechanical Engineering. *Two hours a week.* Fall semester.

16. Steam Engineering.—A continuation of Courses 10 and 11, dealing with steam engines, steam turbines, air compressors, refrigerating machines, and gas engines; considerations affecting the design and efficiency of operation of heat motors, the lay-out of power plants, and power plant economics; organization and management of manufacturing plants. Required of students in Mechanical Engineering. *Two hours a week.* Spring semester.

MECHANICS AND DRAWING

Professor Weston; Associate Professor Grover; Mr. Farnham; Mr. Cleaves

For undergraduates only

1. Drawing.—Instruction and practice in technical freehand drawing and lettering, in the care of drawing instruments, and their use in elementary problems involving right lines, circles, conic sections, and orthographic projections. **Six hours a week.* Fall semester.

2. Drawing.—A continued study of the methods of orthographic projection, isometric projection, and oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. **Six hours a week.* Spring semester.

3. Drawing.—The elementary principles and problems of descriptive geometry, including intersections and developments. **Six hours a week.* Fall semester.

4. Drawing.—A continued study of the making of working drawings of simple machines, together with instruction and practice in making titles for the same. **Six hours a week.* Spring semester.

9. Drawing.—A course designed especially for students in agriculture and for non-engineers. It combines the fundamental principles of Course 1 and Course 2. **Three hours a week.* Fall semester.

10. Drawing.—A continuation of Course 9. **Three hours a week.* Spring semester.

For graduates and undergraduates

5. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curves; torsional stresses and theories of stress in long columns. *Five hours a week.* Fall semester.

6. Mechanics.—A continuation of Course 5. *Five hours a week.* Spring semester.

Primarily for graduates

7. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function with applications to problems in gravitation, hydromechanics, etc. *Three hours a week.* Fall semester.

8. Advanced Mechanics.—A continuation of Course 7. *Two hours a week.* Spring semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 233

PHARMACY

*Professor Jackman; Professor Jarrett.

For undergraduates only

1. Pharmaceutical Chemistry.—Chemical formulæ; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. The text-book is Prescott and Johnson's Qualitative Chemical Analysis. *Five hours a week.* Fall semester.

2. Pharmacy.—Pharmacopœias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; pharmaceutical arithmetic and problems; the chemical elements, official salts, their preparations; organic compounds, their official preparations; official drugs, their preparations; animal preparations; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall semester.

3. Laboratory Pharmacy.—Official and National Formulary preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, and other galenicals; official tests of chemicals, drugs, and preparations for identity, strength, and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. †*Twelve hours a week.* Fall semester.

4. Pharmacopœia.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Phamacopæia. *Five hours a week.* Spring semester.

*Absent on leave

5. Inorganic Pharmacognosy.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall semester.

6. Organic Pharmacognosy.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Culbreth's Materia Medica. *Four hours a week.* Spring semester.

7. Materia Medica.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall semester.

9. Pharmacy Readings.—Current pharmacy literature; research and reference readings; abstracting; reports. †*Three hours a week.* Spring semester.

10. Laboratory Pharmacy.—A continuation of Course 3. †*Ten hours a week.* Spring semester.

11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to principles, and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc. The text-book is Ruddiman's Incompatibilities in Prescriptions. *Three hours a week.* Spring semester.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 234

PHYSICS

The courses in this department are described under the College of Arts and Sciences

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all men students with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

PROFESSOR GLASS

1. MILITARY, FIRST YEAR COURSE
   (a) PRACTICAL
      1—U. S. Infantry Drill Regulations, to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies
      2—Field Service Regulations
      3—Guard Duty
   (b) THEORETICAL
      1—U. S. Infantry Drill Regulations, to include the School of the Company
      2—Manual of Guard Duty
      3—Field Service Regulations
      4—Small Arms Firing Regulations

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the freshman year, counting one-fifth credit.*

2. MILITARY, SECOND YEAR COURSE
   (a) PRACTICAL
      The same as Course 1 (a)
   (b) THEORETICAL
      1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies

2—Records and Official Papers
3—Small Arms Firing Regulations
4—Field Service Regulations

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the sophomore year, counting one-fifth credit.*

3. Military, Third Year Course
   (a) Practical
   Duties consistent with rank in carrying out (a) in Courses 1 and 2
   (b) Theoretical
   Assistant instructors over those taking Course 1 (b)

Open to all who have completed Course 3. *Three hours or the equivalent, a week, counting one-fifth credit*

4. Military, Fourth Year Course
   (a) Practical
   The same as for Course 3 (a)
   (b) Theoretical
   Assistant instructors over those taking Course 2 (b)

Open to all who have completed Course 3. *Three hours or the equivalent, a week, counting one-fifth credit*

PHYSICAL CULTURE AND ATHLETICS

Professor Wingard

1. Physical Training.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movements: elementary dumbbell, wand, and apparatus exercises. *One hour lecture and *two hours practice a week.* Fall semester.

2. Physical Training.—Intermediate and advanced class exercises and combination apparatus work. *One hour lecture and *two hours practice a week.* Spring semester.

3. Physical Training.—An elective advanced course. **Two hours gymnasium. Two hours lecture.* Fall semester.

4. Physical Training.—A continuation of Course 3. **Two hours gymnasium. Two hours lecture.* Spring semester.

5. Practical Hygiene.—*Two hours a week.* Fall semester.

6. Practical Hygiene.—A continuation of Course 5. *Two hours a week.* Spring semester.

MAINE AGRICULTURAL EXPERIMENT STATION

STATION STAFF

CHARLES DAYTON WOODS, Sc. D.	*Director*
JAMES MONROE BARTLETT, M. S.	*Chemist*
WARNER JACKSON MORSE, Ph D.	*Plant Pathologist*
RAYMOND PEARL, Ph. D.	*Biologist*
FRANK MACY SURFACE, Ph. D.	*Biologist*
EDITH MARION PATCH, Ph. D.	*Entomologist*
HERMAN HERBERT HANSON, M. S.	*Associate Chemist*
MAYNE ROSE CURTIS, M. A.	*Assistant Biologist*
EDWARD EUGENE SAWYER, B. S.	*Assistant Chemist*
CLARENCE WALLACE BARBER, B. S.	*Assistant Biologist*
JOHN RICE MINER, B. A.	*Computer*
ROYDEN LINDSAY HAMMOND	*Seed Analyst and Photographer*
ELMER ROBERT TOBIE, B. S.	*Assistant Chemist*
MICHAEL SHAPOVALOV, M. S.	*Assistant Pathologist*

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 8) composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Dean of the College of Agriculture, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, the State Dairymen's Association, the Maine Live Stock

Breeders Association, and the Maine Seed Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station, and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1912-13 was about $68,500; $15,000 of which came from the Hatch fund; $15,000 from the Adams fund; $20,000 from State appropriations and fees from feeding stuff inspection, fertilizer inspection, food and drug inspection, fungicide and insecticide inspection, and seed inspection; $4,500 from State appropriation for printing; $2,500 from the State appropriation for animal husbandry investigations; $1,000 from the United States Department of Agriculture for carrying on coöperative experiments with poultry; and about $10,500 from the sale of produce and miscellaneous sources.

THE OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States

as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Station can undertake from the Adams Act fund is more restricted as the fund can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 24. The Station is well equipped in laboratories and apparatus, particularly in the lines of biological, chemical, entomological, horticultural, pomological, plant pathological, and poultry investigations. It has extensive collections illustrating the botany and entomology of the State. It has a library of over 3,500 volumes, chiefly agricultural and biological journals and publications of the various experiment stations.

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn, and other farm crops." The farm is situated in the counties of Kennebec and Androscoggin, largely in the town of Monmouth. It is on the Farmington branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor," is on the farm.

The farm contains 225 acres, about 200 of which are in orchards, fields and pastures. There are in the neighborhood of 3,000 apple trees upon the place which have been set from 15 to 25 years. Fields that are not in orchards are well adapted to experiments with corn, potatoes, and similar general farm crops. The house has two stories with a large wing, and contains about 15 rooms. It is well arranged for the Station offices and for the home of the farm superintendent. The barns are large, affording storage for hay and grain. The basement affords limited storage for apples, potatoes, and roots.

INVESTIGATIONS

The Station continuues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, orchard and field experiments poultry investigations, and entomological research.

INSPECTIONS

The inspection of agricultural seeds, the inspection of concentrated feeding stuffs, the inspection of commercial fertilizers, the inspection of food and drugs, the inspection of fungicides and insecticides, and the testing of the graduated glassware used in creameries are entrusted to the Station through its Director, who is responsible for the execution of the public laws relating to these matters. The cost of the inspections is borne by a State appropriation and by fees.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are printed as Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries, and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent free to residents of Maine whose names are on the permanent mailing list.

Th results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually, and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs, and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars, and similar fleeting publications. From twenty to thirty are published each year and are sent to different addresses according to the nature of the subject matter.

On request, the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

SUMMER TERM

The Summer Term of the University of Maine is not a summer school, but so far as practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade, and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. Students who desire to anticipate work in their curricula, or who may have work in arrears. A student should be able to make one credit, the equivalent of a five hours' subject for eighteen weeks, during the Summer Term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the university books.

Courses of Study

During the summer of 1913 courses were offered in the following subjects: Chemistry, Home Economics, Education, English, French, German, History, Horticulture, Latin, Mathematics, Mechanics, and Physics.

These courses are described in connection with the courses offered at the University during the remainder of the year.

LECTURES 1913

Professor G. W. Thompson,	(Organ Recital)
President R. J. Aley,	The Recent Meeting of the National Education Association
Dean J. N. Hart.	The Sun
Professor L. E. Woodman,	The Mechanics of a Pipe Organ
Professor G. W. Stephens,	High Prices

DAILY ASSEMBLY

Each morning except Saturdays and Sundays the faculty and students meet in the Chapel at 10.15 for a brief assembly. A short religious service is held, including a song service, and an address is given on some topic of current interest.

LIBRARY

Throughout the Summer Term, the university library of 48,000 volumes, and the reading rooms containing about 300 periodicals and the Maine daily papers, is open from 9 A. M. to 12 M. and from 2 P. M. to 5 P. M., daily, except Saturday afternoon and Sunday. The library privileges ordinarily accorded university students, including the home use of books, are extended to students in the Summer Term.

LABORATORIES, MUSEUMS, AND OBSERVATORY

The laboratories of the departments of Physics and Chemistry are available for use of the students. There is ample provision for carrying on the various courses from the preparatory work to that of the graduate student. All necessary apparatus is supplied to the student without charge; a small charge is made to cover the cost of the articles used. The departments are well equipped with modern apparatus.

The Museum is illustrative of the rocks, flora, and fauna of Maine, and is open at stated periods for the use of the students.

The Observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The work of the observatory will be explained by Professor Hart in an evening lecture.

RECREATION

The athletic field of the University is accessible to those who wish to enjoy outdoor exercise, and two afternoons from four to six will be set aside each week for base ball games and other athletic events. A tennis tournament also will be organized.

Under the management of a permanent committee appointed for that purpose, tramps, picnics, and longer trips to neighboring places of interest will be arranged, as well as more informal occasions on the campus where the students will have opportunity to meet each other and the members of the faculty.

For the further entertainment of the Summer Term students and their friends, the gymnasium will be open one evening of each week, where music will be furnished and opportunity afforded for informal social intercourse.

EXPENSES

Tuition

For residents of Maine, $12.00.

For residents of other states, $18.00.

An additional charge of $1 an hour is made for registration in excess of fifteen hours a week.

Tuition for the term of six weeks, covering all charges for instruction up to fifteen hours a week, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

Living Accommodations

Some changes have been made recently in the arrangements for rooms and board during the Summer Term. The plans have received the most careful consideration and both convenience and comfort are assured at reasonable rates.

Rooms for Men

There are two dormitories for men, Oak Hall and Hannibal Hamlin Hall. Rooms may be obtained for $2.00 a week for one person or

$2.50 with two in a room. Oak Hall is connected with the dining room by means of a covered passage-way. In Hannibal Hamlin Hall there are a few higher priced rooms.

Rooms for Women

There is one dormitory for women on the campus, Mt. Vernon House. The rates are $2.00 a week, one person in a room, or $2.50 with two persons in a room. This house of old colonial style, with its wide hall, open fire-place, and its broad piazza, looking out upon a beautiful view of the campus, is a desirable place for summer residence. Mrs. Kate Clark Estabrooke is Superintendent of the Mt. Vernon House.

Meals

In the dining room of Hannibal Hamlin Hall meals will be served for $4.00 a week. Meals will be served in the Mt. Vernon House at $5.00 a week.

The University Inn, located in the village of Orono, is under university management and is open for summer students. Rooms in private families may be secured for those who prefer them.

Men who wish to bring their families should write early. Special effort will be made to secure suitable accommodations.

In General

Prospective students are invited to consult the President, or any of the instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privilegs.

If there should be a considerable demand for other studies than those named, arrangemnts will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1913. Unimportant changes are likely to be made in 1914.

ALUMNI ASSOCIATIONS

These associations have been organized for the purpose of extending the influence of the University, and keeping alive its spirit in various sections of the country. They have rendered efficient service in promoting the interests of the University

THE GENERAL ASSOCIATION

President, Albert H. Brown, 1880, Old Town
Vice-President, J. Harvey McClure, 1905, Bangor
Recording Secretary, Fremont L. Russell, 1885, Orono
Corresponding Secretary, Ralph K. Jones, 1886, Orono
Treasurer, James A. Gannett, 1908, Orono
Necrologist, James N. Hart, 1885, Orono

ADVISORY COUNCIL

MEMBERS AT LARGE

Louis C. Southard, M. S., LL. D., 1875, Boston, Mass..... 1913
Charles E. Oak, M. E., 1876, Bangor, Maine..... 1913
Perley B. Palmer, B. C. E., 1896, Orono, Maine..... 1914
Charles S. Bickford, B. S., 1882, Belfast, Maine..... 1915
William B. Pierce, B. M. E., 1890, Bangor, Maine..... 1915
Edward H. Kelly, B. S., 1890, Bangor, Maine..... 1916
C. Parker Crowell, B. M. E., 1898, Bangor, Maine..... 1916
Albert H. Brown, B. S., 1880, Old Town, Maine..... 1917
George H. Hamlin, C. E., 1873, Orono, Maine..... 1917

Representing the College of Agriculture

Whitman H. Jordan, Sc. D., LL. D., 1875, Geneva, N. Y..... 1915

Representing the College of Arts and Sciences

DeForest H. Perkins, M. A., LL. B., 1900, Portland, Maine..... 1917

Representing the College of Technology

George F. Black, C. E., 1886, Portland, Maine..... 1913

The West Maine Association

President, DeForest H. Perkins, City Hall, Portland
Secretary and Treasurer, Albert E. Anderson, 415 Congress St., Portland

The Boston Association

President, F. L. Eastman, 1888, 316 Beale St., Wollaston, Mass.
Vice-President, E. J. Wilson, 1907
Secretary and Treasurer, J. H. McCready, 1903, 512 Albany Bldg., Boston, Mass.

The New York Association

President, Ralph E. Lord, 1906, 1 Gramercy Park, New York City
1st Vice-President, Chas. E. Elwell, 1878, New Haven, Conn.
2nd Vice-President, John R. Boardman, 1888, 90 West Broadway, New York City
Secretary, A. W. Stephens, 1899, 169 Rutledge Ave., East Orange, N. J.
Treasurer, Guy E. French, Ex-1905, 100 William Street, New York City

The Western Association

President, Carlos Dorticos, 1903, 1311 East 51st St., Chicago, Ill.
Secretary and Treasurer, H. L. Nash, 1909, 327 Marion St., Oak Park, Ill.
Executive Committee, William Webber, 1884, W. A. Weston, 1900, C. C. Johnson, 1910, F. M. Davis, 1901, M. C. Hart, 1900

The Washington (D. C.) Association

President, L. A. Rogers, 1896, 3735 Oliver St.
Vice-President, C. W. Weeks, Patent Office
Secretary and Treasurer, H. W. Bearce, 1906, Bureau of Standards

Penobscot Valley Association

President, C. Parker Crowell, 1898, Central Street, Bangor
Vice-President, Dr. W. A. Bumps, 1875, Dexter
Secretary and Treasurer, J. H. McClure, 1905, 49 Hammond Street, Bangor
Executive Committee, H. S. Boardman, 1895, Orono; A. W. Sprague, 1905, Bangor; E. Lisherness, 1906, Bangor

The Pittsburgh Association

President, C. D. Smith, 1905, 215 Ninth Street, Aspinwall, Pa.
Vice-President, W. McDonald, 191-, 1880 Clayton Avenue, Pittsburgh, Pa.
Secretary and Treasurer, R. W. Crocker, 1910, 413 Fisk Street, Pittsburg, Pa.
Executive Committee, J. W. Browne, 1899, F. E. Wiley, 1910, F. C. Richardson, 1909

The Kennebec Valley Association

President, Harold E. Cook, 1900, Waterville
Secretary, Ernest C. Butler, 1901, Skowhegan
Treasurer, Samuel J. Foster, 1903, Oakland
Executive Committee, J. H. Burleigh, 1897, E. C. Butler, 1901, H. E. Cook, 1900

Androscoggin Valley Alumni Association

President, Walter L. Emerson, 1909, Lewiston
Vice-President, George A. Whitney, 1893, Lewiston
Secretary and Treasurer, Charles B. Hosmer, 1911, Lewiston
Executive Committee, D. S. Williams, 1900, H. D. Whitney, 1903, Hale Sawtelle, ex-1911

The College of Law Alumni Association

President, Robert W. DeWolfe, 1907, Portland
Vice-President, Alfred A. Lang, 1904, Gloucester, Mass.
Recording Secretary, Mark A. Barwise, 1913, Bangor
Financial Secretary, James M. Gillen, 1913, Bangor.
Treasurer, George H. Worster, 1905, Bangor

Alumni of the School and Teachers' Courses in Agriculture

President, Ralph L. Smith, 1912, Kennebunkport
Vice-Presidents, Walter S. Jones, 1912, Somerville, Mass., F. H. Bickford, 1906, Orono, M. D. Jones, 1913, Orono
Secretary-Treasurer, Perley F. Smith, 1912, East Brownfield
Executive Committee, Walter S. Jones, Somerville, Mass., Maurice A. Peabody, 1911, Exeter, W. Sherman Rowe, 1912, Auburn

APPOINTMENTS

Speakers at the Junior Exhibition

Albert Barnett Ferguson, New York City; Everett Burton Harvey, Bar Harbor; Aileene Browne Hobart, Milford; William Collins Monohan, South Framingham, Mass.; Paul Wheeler Monohon, Biddeford; Carolyn Imogen Wormwood, Bangor.

Speakers at the Sophomore Prize Declamation Contest

James Stuart Crandall, Malden, Mass.; Elizabeth Fitzgerald Hanley, Thomaston; Ray Harrison Lindgren, Belfast; Alice Mildred Poore, Robbinston; William Wason Redman, Dedham, Mass.; Robert Freeman Thurrell, Portland; Forrest Reuben Treworgy, Ellsworth; Ross Harold Varney, Haverhill, Mass.

Members of Phi Kappa Phi

Charles Bayley Adams, Randolph, Vt.; Forrest Bertram Ames, Bangor; Clarence Wallace Barber, Orono; George Freeman Clark, Tremont; Mark Dennis Cronon, Middleton, Mass.; Mae Evelyn Crossman, Newport, N. H.; Alice Josephine Harvey, Bangor; Raymond Olden Jackson, Stillwater; Michael James Kennedy, Woodland; Robert Arthur Pinkham, Farmington; Donald Wing Sawtelle, Orono; Amanda Bailey Severance, Old Town; Antoinette Treat Webb, Bangor.

Members of Tau Beta Pi

Graduate Student

Philip Holden Glover, 1906, Harrington

1913

Ansel Annabel Burleigh, Lynn, Mass.; George Freeman Clark, Tremont; Mark Dennis Cronan, Middletown, Mass.; Raymond Olden Jackson, Harrison; Allan Francis McAlary, Waterville; Robert Arthur Pinkham, Farmington; Howard Otis Burgess, China; Carroll Morse Knight, Cliftondale, Mass.; William Johnston Mitchell, New Bedford, Mass.; John Larcom Ober, Beverly Farms, Mass.

1914

Archie Ashbury Adams, La Grange; Fred Justin Lewis, Springfield, Mass.; Fernando Treat Norcross, Portland; Wilfred Brown Pickard, Hopedale, Mass.; Philip Webb Thomas, Portland; Max Lincoln Wilder, Augusta.

Alpha Zeta

1913

Donald Wing Sawtelle, Orono

1914

Joseph Henry Bodwell, Methuen, Mass.; Richard Foster Crocker, Belfast; James Russell Hudson, Winthrop; Paul Wheeler Monohon, Biddeford; Wilson Montgomery Morse, Waterford; Neil Carpenter Sherwood, Cherryfield.

General Honors

Forrest Bertram Ames, Bangor; George Freeman Clark, Tremont; Mark Dennis Cronan, Middleton, Mass.; Mae Evelyn Crossman, Newport, N. H.; Alice Josephine Harvey, Bangor; Raymond Olden Jackson, Stillwater; Robert Arthur Pinkham, Farmington; Donald Wing Sawtelle, Orono; Amanda Bailey Severance, Old Town; Antoinette Treat Webb. Bangor.

Honors in the College of Law

Charles Bayley Adams, Randolph, Vt.; Michael James Kennedy, Woodland.

Reported to the Adjutant General, U. S. Army, for Publication in the U. S. Army Register, and to the Adjutant General of the State of Maine

Bernard Alexander Ahrens, Long Island City, N. Y.; Philip Sumner Bolton, Gorham; John Walter Hart, Holden; John Larcom Ober, Beverly Farms, Mass.

PRIZES AWARDED

Kidder Scholarship, Sherwood Howe Willard, Greenfield, Mass.

Western Alumni Association Scholarship, Fred Perley Loring, West Pownal.

New York Alumni Association Scholarship, Ross Harold Varney, Haverhill, Mass.

Junior Exhibition Prize, Aileene Browne Hobart, Milford.

Honorary Public Speaking Society Prize (for second place in the Junior Exhibition), Albert Barnett Ferguson, New York City.

Sophomore Declamation Prize, Robert Freeman Thurrell, Portland.

Franklin Danforth Prize, Roger David Long, North Raymond.

Pittsburgh Alumni Association Scholarship, Fred Justin Lewis, Springfield, Mass.

Kennebec County Prize, Robert Arthur Pinkham, Farmington.

Walter Balentine Prize, Sidney Winfield Patterson, Winslow.

Wingard Cup, Elson Hartwell Bigelow, Bridgton.

Holt Prizes, Elson Hartwell Bigelow, Bridgton, Richard Anderson Power, Portland, Luther Barker Rogers, Patten.

L. C. Bateman Prize, George Newton Worden, Vanceboro.

Lewiston Journal Prize, Leslie Atheson Hamel, Portland.

College of Technology Prize, Howard Otis Burgess, China.

Father Harrington Prize, Mae Evelyn Crossman, Newport, N. H.

The Class of 1908 Commencement Cup, which is awarded each year to the class having the largest percentage of its membership present at Commencement, was won in 1909 by the classes of 1872 and 1873; in 1910 by the class of 1875; in 1911 by the class of 1875; in 1912 by the class of 1872; and in 1913 by the class of 1872.

The cup presented by the Senior Skulls to that Fraternity which has during the year maintained the highest average in scholarship was awarded in 1910 to Beta Theta Pi, in 1911 to Alpha Tau Omega, in 1912 to Phi Gamma Delta; and again in 1913 to Phi Gamma Delta.

A cup was offered in 1912 by the Commencement Committee to be competed for during a period of ten years by the fraternities. It is to be awarded each year to that fraternity which has present at Commencement the largest proportion of its alumni, including non-graduates as well as graduates; members of the faculty and members of classes still in college are omitted from the reckoning. At the end of ten years the cup is to become the property of that fraternity which has won it the most times during the period. Only men's general fraternities of more than five years existence are eligible, but locals are not barred. In 1912 Phi Gamma Delta won, with Beta Theta Pi a very close second and Kappa Sigma third. In 1913 Beta Theta Pi won with Phi Kappa Sigma second, and Phi Gamma Delta third.

The American Law Book Company Prize, Andrew Jackson Beck, Deer Isle.

The Dean's Prize, Kenneth Albert Rollins, Farmington Falls.

Sophomore Owl Debating Cup, Class of 1916.

COMMENCEMENT

The Commencement exercises of 1913 were as follows:

FRIDAY, JUNE 6

Law fraternity banquets

SATURDAY, JUNE 7

Law fraternity field day
Phi Kappa Phi initiation, Wingate Hall, 5.00 P. M.
Phi Kappa Phi banquet, the Commons, 6.00 P. M.

SUNDAY, JUNE 8

Baccalaureate address, by Hon. Charles L. Donahue, Portland, the Chapel, 8.00 P. M.

MONDAY, JUNE 9

University buildings open to visitors, 9.30 A. M. to 12.00 M.
Annual Meeting of the Alumni Advisory Council, the Library, 2.30 P. M.
Annual meeting of the College of Law Alumni Association, Law Building, 2.30 P. M.
Class Day exercises, the Campus, 3.00 P. M.
President's reception, the Library, 7.30 to 9.30 P. M.
College of Law alumni banquet, 8.00 P. M.
Fraternity reunions, the fraternity houses, 9.00 P. M.

TUESDAY, JUNE 10

Address to the College of Law Alumni Association, the Library, 10.30 A. M.

Commencement dinner, the Gymnasium, 12.00 M.
Receptions by fraternities, the fraternity houses, and by women students, the Mt. Vernon House, 3.30 to 5.30 P. M.
Alumni luncheon, the Library, 4.30 to 6.30 P. M.
Alumnae luncheon, the Mt. Vernon House, 6.00 P. M.
Annual meeting of the General Alumni Association, the Library, 6.30 P. M.
Class reunions, to be arranged by the classes

WEDNESDAY, JUNE 11

Commencement exercises, the Chapel, 11.00 A. M.; address by Rev. David N. Beach, D. D., President of the Bangor Theological Seminary; conferring of degrees; announcement of honors
Commencement ball, the Gymnasium, 8.00 P. M.

DEGREES CONFERRED

COLLEGE OF AGRICULTURE

Bachelor of Science

Bernard Alexander Ahrens (Poultry Husbandry) .... Long Island City, N. Y.
Arthur Franklin Amadon (Forestry) ..... Boston, Mass.
Harold Francis Ayer (Horticulture) ..... Haverhill, Mass.
Maurice Cobb Bird (Horticulture) ..... Rockland
Marion Wilhelmina Borden (Home Economics) ..... Providence, R. I.
Raymond Houghton Fiske (Forestry) ..... Lincoln
John Walter Hart (Agronomy) ..... Holden
Alice Josephine Harvey (Home Economics) ..... Bangor
Percy Edward Jackman (Horticulture) ..... Vanceboro
Roger David Long (Horticulture) ..... North Raymond
Mildred Hastings Merrill (Home Economics) ..... Auburn
Carlos Everett Norton (Dairy Husbandry) ..... Cumberland Center
Richard Anderson Power (Dairy Husbandry) ..... Portland
Mary Etta Russell (Home Economics) ..... Orono
Ernest Thompson Savage (Forestry) ..... Bangor
Donald Wing Sawtelle (Dairy Husbandry) ..... Orono
Ernest John Webster (Forestry) ..... Farmington
Clifford Walker Wescott (Dairy Husbandry) ..... Patten
George Newton Worden (Agronomy) ..... Vanceboro

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

Edward Preble Ackley (Economics) ..... Peak's Island
Forrest Bertram Ames (English) ..... Bangor

Warren Grant Brewer (Economics) ..... Peak's Island
William Hugh Burns (Education) ..... Dennysville
Clifton Edward Chandler (Economics) ..... Portland
Edward Everett Chase, Jr. (Economics) ..... Bluehill
George Clarence Clarke, (Mathematics) ..... Portland
Mae Evelyn Crossman (English) ..... Newport, N. H.
Winfield Presbury Dillingham (Economics) ..... Freeport
Guy Valentine Dyer (Economics) ..... Calais
Raymond Floyd (Economics) ..... Brewer
George Harold Hamlin (Economics) ..... Orono
Richard Thomas Huntington (English) ..... Augusta
Paul Cyprian Leonard (Economics) ..... Frankfort
Douglas Leffingwell Richardson (Economics) ..... McKinley
Amanda Bailey Severance (Latin) ..... Old Town
Thomas Dudley Shepherd (Economics) ..... Wellesley Hills, Mass.
Nathan Houston Small (Economics) ..... Belfast
Oscar Samuel Smith (Philosophy) ..... Bangor
Herbert Maurice Wardwell, Jr. (Mathematics) ..... Newport
Antoinette Treat Webb (English) ..... Bangor

COLLEGE OF LAW

Bachelor of Laws

Charles Bayley Adams ..... Randolph, Vt.
Percy Lewis Aiken ..... Sorrento
Mark Alton Barwise ..... Bangor
Andrew Jackson Beck ..... Deer Isle
James Wilmer Booth ..... St. Petersburg, Fla.
Bernard Anthony Bove, B. A. (Van Buren College, 1906) ..... Portland
Edgar Francis Corliss, Jr ..... Cumberland
John Bradford Davis ..... Haverhill, Mass.
Max Vincent Doten ..... Calais
William Henry Dwyer ..... Biddeford
Horace Emerson Eaton ..... Bangor
James McKinnon Gillin ..... Bangor
Michael James Kennedy ..... Woodland
Christopher Shirley Roberts ..... Vinalhaven

Kenneth Albert Rollins, B. A. (University of Maine, 1909) .....
.....Farmington Falls
Ernest Allen Studley .....Rockland, Mass.
Erldon Blaisdell Turner .....Augusta
Harry Bloch Westgate .....Taunton, Mass.

COLLEGE OF TECHNOLOGY

Bachelor of Science

Burleigh Ansel Annable (Civil Engineering) .....Lynn, Mass.
Elmore Ayer (Mechanical Engineering).....Dorchester, Mass.
Elson Hartwell Bigelow (Mechanical Engineering) .....Bridgton
Ralph Childs Blanchard (Electrical Engineering)....Cumberland Center
Philip Sumner Bolton (Chemical Engineering) .....Gorham
Henry Leavitt Brown (Chemistry).....Ayer, Mass.
Howard Otis Burgess (Electrical Engineering).....China
Ralph Waldo Buzzell (Civil Engineering).....Camden
Arthur Hildreth Cannon (Mechanical Engineering).....Orono
John Harvey Carleton (Civil Engineering) .....South Berwick
Alden Chase (Electrical Engineering).....Bryant Pond
James Elwood Church (Chemistry).....Gardiner
George Freeman Clark (Civil Engineering).....Tremont
Edward Thomas Aloysius Coughlin (Chemistry).....Holyoke, Mass.
Mark Dennis Cronan (Civil Engineering).....Middleton, Mass.
Oscar Henry Davis (Mechanical Engineering).....North Berwick
Daniel Talbot Finkbeiner (Civil Engineering).....Clearfield, Pa.
Walter Clyde Groves (Civil Engineering).....Camden
Royden Henry Harriman (Electrical Engineering).....Bangor
Frederick Carle Hettinger (Chemistry).....Roslindale, Mass.
Harry Wendell Hinkley (Civil Engineering).....Rangeley
Ralph Corydon Hodges (Electrical Engineering).....Richmond
Ralph Stimson Hopkinson (Electrical Engineering).....Saco
Raymond Olden Jackson (Mechanical Engineering).....Stillwater
Elwood Whitney Jennison (Mechanical Engineering).....Bangor
Harry Gilman Jordan (Civil Engineering).....Waltham
Carroll Morse Knight (Civil Engineering).....Cliftondale, Mass.
John Littlefield (Civil Engineering) .....Brewer
Carleton Gardiner Lutts (Chemistry).....Kittery
Allan Francis McAlary (Civil Engineering).....Waterville

William Joseph McCarthy (Chemistry).....Lewiston
William Hammond Merrill (Electrical Engineering).....Bangor
William Johnston Mitchell (Civil Engineering)...New Bedford, Mass.
Walter Edward Murray (Electrical Engineering).....Lynn, Mass.
John Larcom Ober (Electrical Engineering).....Beverly Farms, Mass.
Edwin Richard Page (Electrical Engineering).....Winterport
Robert Arthur Pinkham (Electrical Engineering).....Farmington
George Henry Quarmby (Electrical Engineering).....Saugus, Mass.
Harold Albion Richards (Electrical Engineering).....Belfast
Carroll Raymond Richardson (Electrical Engineering).....Oakland
Howard Byron Richardson (Civil Engineering).....Southwest Harbor
Elwyn Tristam Ricker (Civil Engineering).....North Saco
Luther Barker Rogers (Electrical Engineering).....Patten
Leon Elroy Seekins (Electrical Engineering).....Skowhegan
Ralph Oscar Shorey (Civil Engineering).....Foxcroft
George Stevens Simpson (Chemistry).....Marlboro, Mass.
Walter Christopher Stone (Chemistry).....Clinton, Mass.
James Atwood Tabor, Jr. (Chemistry).....Corinna
Glenwood Goding Tilley (Electrical Engineering).....Ashland
Harland Eugene Towne (Civil Engineering).....East Dover
Leon Sylvester Tuck (Civil Engineering).....Lee
John Clyde Wallace (Civil Engineering).....Portland
Ralph Wilbur Wetherbee (Electrical Engineering).....Hudson, Mass.

Pharmaceutical Chemist

Zaheeyeh Naoum Barakat .....Bangor
Hugh Maynard Brewster .....Dexter
Sidney Hobart Chandler .....Caribou
Maurice Arthur Fletcher .....Wilton
Wilfred Michael Gallagher .....Bangor
Edward Sanderson Redman .....Corinna
Walter Henry Rogers .....Topsham
Harold Henry Searles .....Bangor

ADVANCED DEGREES

Master of Arts

Frances Wentworth Cutler, B. A. (Vassar College, 1909) English
Bangor

Clayton Ulrey, B. A. (Indiana University, 1911) Physics .....Orono
Helen Charlotte Worster, B. A. (University of Maine, 1912) English ..... Bangor

Master of Laws

Everett Harlow Bowen, B. A. (Colgate University, 1903; M. S., University of Maine, 1905; LL. B., 1912).....Bangor
James Louis Boyle, B. A. (St. Joseph's College, 1905; LL. B., University of Maine, 1912).....Bangor
Carl Cotton, B. A. (Colby College, 1900; LL. B., University of Maine, 1906) .....Contocok, N. H.
Claude Dewing Graton, LL. B. (1900).....Burlington, Vt.
Frederick Juchoff, A. M. (Kansas City University; LL. B., Ohio Northern University; LL. D., Greer College).....Chicago, Ill.
Wilbur Frances Merrill, LL. B. (1911).....Wiscasset

Master of Science

William Hinds Darrow, B. A. (Middlebury College, 1911; M. A. Cornell University, 1912) Plant Pathology .....Orono
William Freeman Schoppe, B. S. (University of Maine, 1907) Biology .....Orono
Philip Holden Glover, B. S., (University of Maine, 1906) Civil Engineering .....Harrington
Michael Shapovalov, B. A. (University of Dorpat, 1903) Plant Pathology .....Orono
Earl Ovando Whittier, B. S. (University of Maine, 1911) Chemistry .....Orono

PROFESSIONAL DEGREES

Civil Engineer

Charles Eugene Davis, B. S. (1907).....Arlington, Mass.
Philip Holden Glover, B. S. (1906).....Harrington
George Weymouth Hutchinson, B. C. E. (1893).....Greensburgh, Pa.
Alpheus Crosby Lyon, B. S (University of Maine, 1902; Massachusetts Institute of Technology, 1904).....Orono
Earle Revere Richards, B. S. (1906).....Belmont, Mass.

Electrical Engineer

Howard Rich Johnson, B. S., (1909).....Lynn, Mass.

Mechanical Engineer

George Roger Tarbox, B. S., (1906).....Stowe, Pa.

CERTIFICATES

Home Economics

Luzetta Allen Stearns.....Millinocket

Two Years Course in Agriculture

Nelson Kenneth Austin.....Danville
John Wallace Barford .....East Chatham, N. Y.
Lucius Ray Bates.....Westboro, Mass.
Woodbury Lee Berce.....Caribou
Harold Floyd Boothby.....Maplewood
Leon Augustine Dodge.....South Newcastle
George Edwin Gray .....Anson
Martin Ernest Jones.....Nashua, N. H.
Everett Augustus Kimball.....South Lawrence, Mass.
James Augustus Leary.....East Hampden
Lawrence Otho Merrill.....Mechanic Falls
Leppien William Morse.....Upton
Arthur Waterhouse Richardson.....Old Orchard
Melvin Henry St. Clair.....Owl's Head
Elmer Frederick Sawyer.....North Saco
Everett Aaron Snow.....Lawrence, Mass.
Earle Wentworth Tarbox.....Saco
Carroll Benton Wadsworth .....Cornish
Thomas Rose West.....Saco
Philip Furness Woodman.....Biddeford

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agronomy, An. Animal Industry, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ch. Eng. Chemical Engineering, Ce. Civil Engineering, Ec. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Ht. Horticulture, Hy. History, He. Home Economics, Lt. Latin, Ms. Mathematics, Me. Mechanical Engineering, Ph. Poultry Husbandry, Pm. Pharmacy, Pl. Philosophy, Ps. Physics, Rm. Romance Languages.

GRADUATE STUDENTS

Ames, Forrest Bertram, B. A., Ch. University of Maine, 1913	*Bangor*	Φ H K House
Barber, Clarence Wallace, B. S., Ag. University of Maine, 1912	*Orono*	Campus
Barrows, Henry Robbins, Ph. B., M. S., Bl. Hamilton College, 1906-1902	*Clinton, N. Y.*	206 H. H. Hall
Cleaves, Charles Brown, B. S., Ce. University of Maine, 1912	*Portland*	No. Main St.
Durgin, Albert Guy, B. S., M. S., Ch. University of Maine 1908, 1909	*Orono*	Middle St.
Jones, Maurice Daniel, B. A., Ag. University of Maine, 1912	*Orono*	Orono
Nordgaard, Martin Andrew, A. B. St. Olaf College, 1904	*Orono*	405 H. H. Hall
Sawyer, Edward Eugene, B. S., Ch. University of Maine, 1912	*Old Town*	Old Town

Scott, Irving Osgood, B. S., Ed. Dartmouth College, 1910	*Hinckley*	Oak Hall
Stephenson, Joseph Newell, M. S. Ch. Massachusestts Institute of Technology, 1909. Rose Polytechnic Institute, 1911	*Orono*	10 Oak St.
Tobey, Elmer Robert, B. S., Ch. University of Maine, 1911	*Orono*	Pond St.
Webb, Antoinette Treat, B. A., Eh. University of Maine, 1913	*Bangor*	Myrtle St.
Whittier, Earle Ovando, B. S. Ch. University of Maine, 1911	*Bangor*	458 Hammond St.

SENIORS

Abbott, Arthur Warren, Ht.	*Portland*	Φ Γ Δ House
Adams, Archie Asbury, Me.	*LaGrange*	Main St.
Adams, Harold Purington, Ht.	*Bowdoinham*	Φ K Σ House
Allen, Clifton Lowery, Ce.	*Mt. Vernon*	University Inn
Andrews, Robert Wilbur, Ce.	*West Pembroke*	B Θ Π House
Atwood, Charles Raymond, Fy.	*Rumford*	Σ A E House
Bartlett, Louise, Lt.	*Orono*	College St.
Beale, Douglas Marsh, Ht.	*Orono*	Peters St.
Bean, Philip Hanson, Ce.	*Saco*	Forest St.
Beaupré, Estelle, Rm.	*Bangor*	Mt. Vernon House
Bradbury, Ira Miller, Ce.	*Gorham*	Φ Γ Δ House
Bray, Paul DeCosta, Ch.	*Turner*	B Θ Π House
Brown, Lewis John, Ag.	*Gorham, N. H.*	Δ T Δ House
Buck, William Harold, Ce.	*Ansonia, Conn.*	201 Oak Hall
Buzzell, Marion Stephanie, Rm.	*Old Town*	Old Town
Chalmers, Dwight Stillman, Ee.	*Albion*	Φ H K House
Chase, Charles Arthur, Bl.	*Sebec Station*	Δ T Δ House
Clark, Hermon Richard, Ee.	*Townsend, Mass.*	203 H. H. Hall
Cobb, Harold Vernon, Ec.	*Livermore Falls*	Σ A E House
Coffey, Ralph Thompson, Ht.	*South Brewer*	Θ X House
Conners, Edward Warren, Ce.	*Great Works*	Great Works
Cousins, Mary Longfellow, Lt.	*Brewer*	Mt. Vernon House
Crocker, Richard Foster, Ht.	*Belfast*	A T Ω House
Dage, Zu Chi, Ch.	*Soo Chow, China*	312 Oak Hall
Dearborn, Fred Earle, Ch.	*Penacook, N. H.*	Σ N House
Dinsmore, Harold Lee, Ee.	*Hebron*	Φ K Σ House

Felton, Albert, Ch.	*Parsons, West Va.*	Mill St.
Ferguson, Russell Sweetser, Bl.	*New York City*	Κ Σ House
Field, Leon Albion, Me.	*Biddeford*	Σ Α Ε House
Foster, David Albert, Ce.	*Ellsworth Falls*	302 Oak Hall
Fowler, Ernest Eugene, Me.	*Hartford, Conn*	Σ Α Ε House
French, Norman Richards, Ps.	*Ft. Fairfield*	Σ Χ House
Gerrish, Harold Colby, Ee.	*Bangor*	102 H. H. Hall
Getchell, Edward Leonard, Ee.	*Waterville*	Σ Α Ε House
Gowen, John Whittemore, Ag.	*Arlington, Mass.*	301 H. H. Hall
Goodwin, Fred Gilman, Ee.	*Charleston*	203 H. H. Hall
Haggart, Alexander LeRoy, Ce.	*Franklin, Mass.*	Φ Κ Σ House
Hall, Howe Wiggin, Ag.	*Rockland*	Φ Γ Δ House
Harvey, Everett Burton, Eh.	*Bar Harbor*	Φ Η Κ House
Haskell, Theodore Winthrop, Ec.	*Westbrook*	Φ Γ Δ House
Hayes, Alden Burgess, Me.	*Bangor*	Σ Α Ε House
Higgins, Oswald Burnett, Ps.	*Sewaren, N. J.*	Κ Σ House
Higgins, Thomas Carol, Ce.	*Bar Harbor*	Σ Ν House
Hobart, Aileene Browne, Eh.	*Milford*	Milford
Hudson, James Russell, An.	*Winthrop*	Β Θ Π House
Jones, Carrol Clair, Ec.	*Solon*	Φ Η Κ House
Jones, Frederick Sawtelle, Ee.	*Augusta*	Β Θ Π House
Jordan, Marion Luella, Lt.	*Old Town*	Old Town
Junkins, John Norman, Me.	*Milford, N. H.*	Λ Χ Α House
Kelly, Charles Merrill, Jr., Ee.	*Ipswich, Mass.*	Φ Η Κ House
Kimball, William Earle, Ce.	*South Paris*	Φ Κ Σ House
King, Albert Lincoln, Fy.	*South Paris*	Φ Κ Σ House
King, Henry Augustus, Ht.	*Peabody, Mass.*	Σ Ν House
Lewis, Fred Justin, Ce.	*Springfield, Mass.*	Κ Σ House
Libby, Arthur Clarence, Ce.	*Scarboro*	202 Oak Hall
Loftus, Edward Michael, Ch. Eng.	*Bangor*	Θ Χ House
Lucas, Warren Stanhope, Ms.	*Auburn*	Δ Τ Δ House
McKenney, Charles Raymond, Ht.	*Orono*	Α Τ Ω House
McLauchlan, Leon Stanley, Ag.	*Ft. Fairfield*	Φ Κ Σ House
Makanna, Nicholas Philip, Ce.	*Bangor*	Bangor
Martin, Preston Hussey, Ag.	*Ft. Fairfield*	Φ Γ Δ House
Martinelli, Mario, Ch.	*Wareham, Mass.*	Δ Τ Δ House
Monahan, William Collins, Ag.	*S. Framingham, Mass.*	University Inn
Monohon, Paul Wheeler, Ag.	*Biddeford*	Φ Κ Σ House

Morse, Wilson Montgomery, An.	*Waterford*	Φ K Σ House
Murray, Paul Elmer, Ee.	*Skowhegan*	K Σ House
Newman, George Burgess, Bl.	*Fryeburg*	K Σ House
Norcross, Fernando Treat, Ce.	*Portland*	Φ Γ Δ House
Patterson, Sidney Winfield, An.	*Winslow*	301 H. H. Hall
Peaslee, Roy William, Ag.	*Randolph*	Δ T Δ House
Pendleton, Mark, Ee.	*Islesboro*	B Θ Π House
Perkins, Anna Belle, Rm.	*North Brooksville*	College St.
Philbrook, Phlip Edwin, Me.	*Woodfords*	A T Ω House
Pickard, Wilfred Brown, Ce.	*Hopedale, Mass.*	Σ N House
Pride, Woodbury Freeman, Ht.	*Auburn*	301 Oak Hall
Richardson, Lester Lary, Ce.	*Old Orchard*	Main St.
Rodick, Eugenia, He.	*Bar Harbor*	University Inn
Rounds, Gerald Arlester, Ce.	*Portland*	Φ H K House
St. Onge, Arthur Amos, Rm.	*Dover*	Δ T Δ House
Sawyer, Allan Frank, Ec.	*Milbridge*	B Θ Π House
Sherwood, Neil Carpenter, An.	*Cherryfield*	Dairy Bldg.
Sinkinson, George Edward, Ec.	*Somersworth, N. H.*	Σ X House
Skolfield, Herbert Nason, Ce.	*Brunswick*	Φ K Σ House
Smith, Leon Campbell, Fy.	*Topsham*	Φ H K House
Stevens, Roland Earle, Ht.	*Belfast*	A T Ω House
Sturgis, David William, Ec.	*Gorham*	K Σ House
Thomas, Philip Webb, Ce.	*Portland*	Φ Γ Δ House
Thompson, William Raymond, Ht.	*Bangor*	Θ X House
Tipping, Charles Herbert, Me.	*Claremont, N. H.*	A T Ω House
Towner, Wayland Dean, Fy.	*Malden, Mass.*	Σ X House
Wescott, Guy Raymond, Ce.	*Rumford*	Σ A E House
Wilder, Max Lincoln, Ce.	*Augusta*	Σ A E House
Willard, Sherwood Howe, Ee.	*Greenfield, Mass.*	Φ H K House
Wormwood, Carolyn Imogen, Eh.	*Bangor*	Bangor
Youngs, Frederick Shaw, Ce.	*Bangor*	B Θ Π House
York, George James, Hy.	*Yarmouthville*	Θ X House

JUNIORS

Aageson, Wilbur Cole, Ag.	*Thomaston*	Park St.
Adams, James Abraham, Ms.	*Orono*	35 Mill St.
Allen, Charles Stanley, Ce.	*Augusta*	Σ X House
Bailey, Harold Perry, Ch. Eng.	*Dexter*	B Θ Π House
Baker, Davis Seth, Ce.	*Caratunk*	A T Ω House
Banks, Merton Ford, Ce.	*Biddeford*	Σ A E House

Bayer, Harry Lewis, Ce.	*Bangor*	101 H. H. Hall
Bernheisel, George Hench, Ag.	*New Bloomfield, Pa.*	Φ K Σ House
Beverage, Harold Henry, Ee.	*No. Haven*	Σ A E House
Blaisdell, Lawrence Allen, Ee.	*Lynn, Mass.*	Θ Σ House
Boothby, Everett Osgood, Me.	*Gorham*	K Σ House
Bowler, William Edward, Ee.	*Spencer, Mass.*	110 Oak Hall
Bragg, Alfred Orman, Ch. Eng.	*Foxcroft*	310 H. H. Hall
Brennan, James Joseph, Ch. Eng.	*Bangor*	Bangor
Brennan, Rosemary Agnes, Gm.	*Bangor*	Mt. Vernon House
Brockway, Earle Maurice, Fy.	*Dexter*	311 H. H. Hall
Brooks, James Stothard, Ce.	*Brewer*	Φ K Σ House
Browning, Neva Lenora, Rm.	*Orono*	Orono
Chapman, Fred Elton, Ee.	*Lake Hermon*	407 H. H. Hall
Clark, Robert Pinkham, Ec.	*Lincoln*	Λ T Ω House
Clifford, Ernest Alfred, Ce.	*Brunswick*	Λ T Ω House
Close, Roland Edgerly, Ec.	*Bangor*	Bangor
Coffin, Everett, Ce.	*Brunswick*	Φ H K House
Coombs, Olive Erdine, Lt.	*N. Islesboro*	Park St.
Cooper, Harold, Me.	*Auburn*	Θ X House
Coyne, Albert Leo, Ce.	*Worcester, Mass.*	Δ T Δ House
Crandall, James Stuart, Ce.	*Malden, Mass.*	Σ X House
Creighton, Maynard Joshua, Ch. Eng.	*Thomaston*	Φ Γ Δ House
Crosby, Carle Byron, Ee.	*Bangor*	Σ A E House
Croteau, Leon John, Ce.	*Worcester, Mass.*	College St.
Davis, Lucretia Almira, Rm.	*Old Town*	Old Town
Donahue, Norman Sylvester, Ag.	*Luthersburg, Pa.*	K Σ House
Dore, Edward Albert, Ch. Eng.	*Bangor*	H. H. Hall
Douglas, Chauncey Hazen, Fy.	*Peabody, Mass.*	111 H. H. Hall
Douglass, Raymond Donald, Ms.	*Gorham*	Δ T Δ House
Doyle, Joseph Edward, Fy.	*Danvers, Mass.*	Θ X House
Easson, Ralph Barrows, Ht.	*So. Paris*	Φ K E House
Elliott, Park, Ee.	*Dover*	Σ A E House
Emmons, Norman Eudell, Ee.	*Chester, Conn.*	109 H. H. Hall
Fish, Harold Mahlon, Ce.	*Farmington*	Λ X Λ House
Fletcher, Maurice Arthur, Ch.	*Wilton*	Λ X Λ House
Fletcher, Roland Ezra, Fy.	*Madison*	Σ N House
Fogg, Harry Willard, Fy.	*Hull's Cove*	Σ N House

Fogler, Raymond Henry, Ag.	*West Rockport*	Σ X House
Fowler, Henry Winslow, Fy.	*Berlin, N. H.*	Θ X House
Freese, Frank Drummond, Ec.	*Bangor*	K Σ House
Gerhardts, Emma, He.	*Westbrook*	Mt. Vernon House
Gilman, Madison Leavitt, Ec.	*Anson*	B Θ Π House
Glover, John White, Me.	*Rockland*	Σ X House
Goldsmith, Chester Hamlin, Ch.	*Beverly, Mass.*	Σ X House
Goodwin, Alleyn Maurice, Ee.	*Saco*	K Σ House
Goodwin, Earl Corson, Ec.	*Oakland*	Λ T Ω House
Goodwin, Eugene Wiley, Me.	*Rockport*	301 H. H. Hall
Gordon, Forest Chandler, Ch. Eng.	*Auburn*	Φ Γ Δ House
Gray, Ethel Mae, Lt.	*Penobscot*	Mt. Vernon House
Gulliver, James Lucius, Ec.	*Auburn*	B Θ Π House
Hall, Preston Martin, Ch.	*Taunton, Mass.*	Φ Γ Δ House
Hamel, Leslie Atheson, Ag.	*Portland*	304 H. H. Hall
Hamill, Clarence Thomas, Ch.	*Worcester, Mass.*	402 H. H. Hall
Hanly, Elizabeth Fitzgerald, Eh.	*Thomaston*	University Inn
Hanson, Ernest Freeman, Ec.	*Gorham*	Φ Γ Δ House
Haskell, Laurence Herbert, Ce.	*Lynn, Mass.*	406 H. H. Hall
Hatch, Frederic Boynton, Ce.	*Pemaquid Harbor,*	Λ X Λ House
Hayford, Herbert Wilder, Rm.	*Dover*	Δ T Δ House
Hight, Vernon Ivan, Ce.	*Caribou*	Φ K Σ House
Hill, William Barlow, Fy.	*Gorham*	K Σ House
Hines, Mary Elizabeth Burns, Lt.	*Middletown, Conn.*	Mt. Vernon House
Hodgins, Laura Pearl, Lt.	*Calais*	Mt. Vernon House
Hodgkins, Harold Eugene, Ee.	*Waterville*	Φ H K House
Hodgkins, Herbert Charles, Ee.	*Waterville*	Φ H K House
Holyoke, Margaret Lillis, Bl.	*Brewer*	Mt. Vernon House
Howland, Edgar Gordon, Ee.	*Plymouth, Mass.*	K Σ House
Hoyt, Ralph William, Ag.	*Waterville*	Φ Γ Δ House
Hutchins, Mollie Chase, Gm.	*Fryeburg*	Mt. Vernon House
Hutchinson, Albert Fletcher, Ch. Eng.	*No. Dexter*	311 H. H. Hall
Ingalls, Everett Palmer, Ce.	*Bridgton*	B Θ Π House
Jones, Harold Libby, Ce.	*Corinna*	Φ H K House
Kelley, Francis Anthony, Fy.	*Andover, Mass.*	Δ T Δ House
Kimball, Roland Gerry, Pm.	*Norway*	Φ K Σ House

Leavitt, Harold Walter, Ce.	*Monmouth*	211 H. H. Hall
Lindgren, Ray Harrison, Ce.	*Belfast*	Φ K Σ House
Luther, Harris Gates, Me.	*Hadlyme, Conn.*	109 H. H. Hall
Lyon, Clement Ames, Ag.	*E. Bridgewater, Mass.*	Σ N House
McKenney, Maurice Roy, Ee.	*Stillwater*	Stillwater
Mace, Asa Russell, Ce.	*Aurora*	Φ K Σ House
Magnus, Carl, Ch. Eng.	*Biddeford*	Σ N House
Maines, Esca Allan, Ed.	*Norway*	Oak St.
Martin, William Hope, Fy.	*Carlisle, Pa.*	Σ X House
Mathews, Norman Lyle, Ag.	*Waterville*	Θ X House
Mellen, William Henshaw, Me.	*Athol, Mass.*	College St.
Merrill, Gladys Helen, Rm.	*Orono*	Campus
Morrell, Lester Howe, Ec.	*Lewiston*	Φ H K House
Newcomb, Edwin Barrett, Ce.	*Cumberland Mills*	Σ X House
Norton, Chester Harold, Fy.	*Chelsea, Mass.*	Θ X House
Oak, Malcolm Hayford, Ch.	*Caribou*	B Θ Π House
Parker, Joseph Batchelder, Ag.	*Bangor*	Bangor
Parks, David Weaver, Ps.	*Ft. Fairfield*	211 H. H. Hall
Patten, Mountford Elmes, Fy.	*Carmel, R.F.D., No. 3*	A T Ω House
Perry, Earl Francis, An.	*Bangor*	Θ X House
Peters, Shenton Ashley, Ee.	*Bangor*	Bangor
Pettey, Willis Thurston, Ag.	*Dartmouth, Mass.*	Δ T Δ House
Philbrick, John Harvey, Ag.	*Bangor*	Φ H K House
Philbrook, Walker Merriam, Ee.	*Rockport*	201 H. H. Hall
Pierce, Clarence Cheney, Ce.	*Berlin, N. H.*	Θ X House
Pierce, Raymond Trussell, Ee.	*Bangor*	Σ A E House
Pinkham, Lloyd Francis, Ee.	*Lewiston*	211 H. H. Hall
Rand, Ernest Abbott, Fy.	*Woodfords*	Φ K Σ House
Randall, Harry Algernon, Ee.	*So. Portland*	Σ N House
Randall, James Stuart, Ce.	*Whitman, Mass.*	Φ Γ Δ House
Redman, William Wason, Ag.	*Dedham, Mass.*	Σ X House
Rogers, Walter Henry, Ch.	*Topsham*	Φ H K House
Russell, Asenath, He.	*Orono*	Main St.
Sawyer, Leon George, Ee.	*Bridgton*	312 H. H. Hall
Schwey, Abraham Ira, Fy.	*Portland*	412 H. H. Hall
Shaw, Merle Branard, Ch. Eng.	*Orono*	Θ X House
Sheridan, Philip Brinsley, Ee.	*Salem, Mass.*	Σ N House
Sleeper, Harvey Prescott, Ee.	*Bangor*	Φ K Σ House
Slocum, Paul Frederick, Ce.	*New York City*	University Inn
Smart, Frances Gertrude, Rm.	*Bangor*	Mt. Vernon House

Stewart, Loren Prescott, Ce.	*Thorndike*	Σ A E House
Thurrell, Robert Freeman, Ee.	*Portland*	Φ Γ Δ House
Titcomb, Harry Alton, Me.	*So. Paris*	Φ K Σ House
Tolman, Lewis Brewster, Ec.	*Bangor*	Φ Γ Δ House
Treat, Gladys, Gm.	*Winterport*	University Inn
Treworgy, Forest Reuben, Ee.	*Ellsworth*	207 H. H. Hall
Twitchell, Carl Elmer, Me.	*Patten*	Φ K Σ House
Varney, Ross Harold, Ec.	*Haverhill, Mass.*	Φ K Σ House
Walker, James Clifford, Ee.	*Portland*	Θ X House
Walters, Philip Harris, Ag.	*Readfield*	Campus
Wark, William Lucas, Me.	*Cumberland Mills*	Σ N House
Warren, Paul Alanson, Ag.	*Dover*	Δ T Δ House
Weeks, Jedediah Earle, Ce.	*Wells*	207 H. H. Hall
Welch, Gerald Cushman, Ce.	*Oakland*	A T Ω House
White, Harold Chandler, Ch. Eng.	*Bangor*	K Σ House
Whitney, Thomas Boardman, Ch. Eng.	*Caribou*	408 H. H. Hall
Whitten, Alice Idella, Hy.	*Belfast*	Myrtle St.
Wilbur, Oscar Milton, Ag.	*Pembroke*	Pine St.
Williams, Harry Duncan, Ce.	*No. Easton, Mass.*	Σ A E House
Winship, Rachel Helene, He.	*Auburn*	Mt. Vernon House
Woodsum, Edmund Nugent, Me.	*Fairfield*	Stillwater
Woodward, George Thomas, Me.	*Lisbon Falls*	Φ H K House
Worcester, Henry Franklin, Eh.	*Old Orchard*	Σ X House

SOPHOMORES

Aikins, Frederick Harlow, Ag.	*Windham*	209 Oak Hall
Ames, Ivan Cecil, Ce.	*North Haven*	B Θ Π House
Ashton, Harold Dudley, Ce.	*Springfield, Mass.*	K Σ House
Atwater, Donald Vince, Ag.	*Ft. Fairfield*	Σ X House
Baird, Elmer Lawrence, Ag.	*Hartland*	Φ Γ Δ House
Ballou, Harold Lewis, Ee.	*Greenfield, Mass.*	Φ H K House
Barrett, Basil Edward, Ee.	*Bluehill*	Σ X House
Barrows, Lewis Orin, Ch.	*Newport*	B Θ Π House
Bartlett, Carroll Arthur, Ag.	*Norway*	211 Oak Hall
Bartlett, Russell Eustis, Ag.	*Rockland*	B Θ Π House
Bell, Roger Warren, Ce.	*Arlington, Mass.*	K Σ House
Bidwell, Harold Ward, Gm.	*Hartford, Conn.*	Σ A E House
Billings, Welford Parsons, Fy.	*Eddington*	203 H. H. Hall
Blackman, Charles Leon, Ag.	*Peaks Island*	Park St.

Blanchard, Ensor Harding, Cc.	*Buenos Aires, Argentine Republic*	Forest Ave.
Blanchard, Robert Germain, Cc.	*Cumberland Center*	Λ X Λ House
Blood, Lewis Henry, Ag.	*Foxcroft*	Σ Λ E House
Bonney, Timothy Doten, Ee.	*Mexico*	Θ X House
Boothby, Horace Everett, Ag.	*Reading, Mass.*	Δ T Δ House
Bradbury, Burke, Ee.	*Old Town*	Φ Γ Δ House
Brown, Brooks, Ag.	*Dover*	Δ T Δ House
Brown, Walter True, Me.	*West Bath*	Peters St.
Buckley, Forest, Ce.	*South Leeds*	Park St.
Burr, Charles Washington, Fy.	*Northeast Harbor*	Φ K Σ House
Butters, Arthur Erwin, Ec.	*Old Town*	Old Town
Caswell, Lester, Hy.	*Harrison*	Λ X Λ House
Causland, Kenneth Martin, Ee.	*Freeport*	K Σ House
Chadbourne, Paul Everett, Me.	*Biddeford*	Φ K Σ House
Clement, Stephen Caldwell, Ec.	*Belfast*	306 H. H. Hall
Coffin, Harold Wilhelm, Ee.	*Portland*	Θ X House
Colbath, Muriel Eva, Eh.	*Hampden*	Hampden
Colbath, Orman Schuyler, Ag.	*Hampden*	Δ T Δ House
Condon, Guy Berwyn, Ec.	*So. Penobscot*	Σ X House
Currier, Doris, Gm.	*Bangor*	Mt. Vernon House
Currier, Harold Newcomb, Ch.	*Brewer*	Φ K Σ House
Currier, Karl Moody, Ag.	*Brewer*	Φ K Σ House
Curtis, Fred Holmes, Ec.	*Addison*	Λ T Ω House
Damren, Fred Llewellyn, Ch. Eng.	*Auburn*	Φ H K House
Davis, Arthur Linwood, Ee.	*Auburn*	Θ X House
DeBeck, Mary Muriel, Lt.	*Franklin*	University Inn
Dingley, Roland Sylvester, Ch. Eng.	*Farmington*	Σ X House
Dodge, John Maynard, Me.	*Boothbay*	Φ H K House
Dolan, Walter James, Ch.	*Worcester, Mass.*	Θ X House
Dole, Charles Edmund, Me.	*Bangor*	B Θ Π House
Driscoll, Michael Columbus, Ec.	*N. Abington, Mass.*	Σ N House
Eddy, Emery Davis, Fy.	*Bangor*	Bangor
Edes, Omar Kelsey, Eng.	*Dexter*	Φ Γ Δ House
Elliott, James Carroll, Ag.	*No. Rumford*	402 H. H. Hall
Emerson, Walter Davis, Me.	*Orono*	Park St.
Emery, Charles Irving, Fy.	*Salisbury Cove*	Σ N House
Emery, Clarence Fairfield, Ag.	*Salisbury Cove*	Park St.
Fairchild, Thomas Everett, Ag.	*Livermore Falls*	Φ K Σ House

Falvey, John Michael, Ch. Eng.	*South Berwick*	Α Τ Ω House
Folsom, Charles Herbert, Ce.	*Dexter*	308 H. H. Hall
Foster, Marie Fredrika, Ms.	*Bar Harbor*	Mt. Vernon House
Fox, Clyde Calvin, Ag.	*Wilkes Barre, Pa.*	Β Θ Π House
Fraser, Elwood Stuart, Ag.	*Peaks Island*	Park St.
Frawley, Isabel Frances, Rm.	*Bangor*	Mt. Vernon House
Fricke, Albert Theodore, Bl.	*Bridgeport, Conn.*	Φ Κ Σ House
Gowell, Roger Locke, Ag.	*Auburn, R. F. D. 7*	306 H. H. Hall
Graham, Clyde Lewis, Ee.	*Northumberland, N. H.*	407 H. H. Hall
Grant, Benjamin Elwell, Ch. Eng.	*Cumberland Mills*	Σ Χ House
Grant, Philip Burr, Lt.	*Bangor*	Bangor
Greenleaf, Florence Evelyn, He.	*Auburn*	Mt. Vernon House
Hall, Robert Holyoke, Ag.	*Brewer*	101 H. H. Hall
Ham, Everett Goss, Ch. Eng.	*Foxcroft*	201 H. H. Hall
Hamblen, Archelaus Lewis, Ee.	*Gorham*	Δ Τ Δ House
Hickson, Eugene Francis, Ch. Eng.	*Bangor*	Bangor
Hobbs, Albert Cyprian, Ee.	*Norway R. F. D. No. 2*	Φ Η Κ House
Holt, Frank Ashley, Ch.	*Bangor*	Φ Η Κ House
Hunt, Lawrence Miliken, Ch.	*Old Town*	Φ Γ Δ House
Hutchins, Liston Davis, Ag.	*Methuen, Mass.*	Σ Α Ε House
Jones, Harold Stanley, Fy.	*Belfast*	Α Τ Ω House
Jones, Marguerite, He.	*Waldoboro*	University Inn
Jordan, Maynard Fred, Ms.	*Islesford*	204 H. H. Hall
Judkins, Eshburn Oscar, Fy.	*Upton*	Grove St.
Keyte, William Albert, Ch.	*Dexter*	Φ Η Κ House
Kiernan, John Henry, Ms.	*Wareham, Mass.*	Φ Η Κ House
Kirk, George Edwin, Ch.	*Bar Harbor*	Σ Ν House
Kriger, Lewis Herman, Ag.	*Portland*	412 H. H. Hall
Kritter, Julius Henry, Ce.	*Bradford, Mass.*	Α Τ Ω House
Lackee, Hobart Goold, Me.	*Woodfords*	Δ Τ Δ House
Lane, Charles Kent, Ch.	*Rockland, Mass.*	Κ Σ House
Lawry, Otis Carroll, Ch.	*Fairfield*	Β Θ Π House
Leecock, John Thomas, Ch.	*No. Andover, Mass.*	Δ Τ Δ House
Lewis, Benjamin West, Ee.	*Boothbay Harbor*	Β Θ Π House
Libby, Clarence Earl, Ee.	*Albion*	308 H. H. Hall
Ljungberg, David Graham, Ce.	*Worcester, Mass.*	Δ Τ Δ House
Loring, Fred Perley, Fy.	*West Pownal*	Σ Α Ε House

McAlister, Royce Delano, Ee.	*Bucksport*	Σ K E House
McAvey, Liela Joyce, He.	*Bangor*	Mt. Vernon House
Macdonald, Irving Clifford, Ch. Eng.	*Portland*	Φ H K House
McLaughlin, George William, Ms.	*Harrington*	College St.
McLaughlin, James Blaney, Ms.	*Harrington*	College St.
Mangan, Thomas Gerald, Ce.	*Pittsfield, Mass.*	101 H. H. Hall
Mansfield, Everett Keith, Ch. Eng.	*Fryeburg*	Θ X House
Marsh, Philip Merrill, Ph.	*Farmington*	College St.
Martin, Blynn, Ch. Eng.	*New Gloucester*	Θ X House
Mathews, Wilbur Leonard, Ee.	*Berwick*	Δ T Ω House
Mayers, Howard Winfield, Ce.	*Dresden*	Δ T Δ House
Merrill, Earl Stephen, Bl.	*Orono*	Campus
Merrill, Philip Knight, Ec.	*Woodfords*	Δ T Δ House
Moore, Ralph Lee, Ce.	*Hallowell*	Σ A E House
Moore, Robert McGregor, Me.	*Biddeford*	Φ K Σ House
Morris, Lester George, Ag.	*Bingham*	Δ T Θ House
Morrison, Mildred Cora, Rm.	*Bar Harbor*	Mt. Vernon House
Moulton, George Albert, Ce.	*East Bromfield*	312 H. H. Hall
Mullaney, James Edward, Ce.	*Somerville, Mass.*	311 H. H. Hall
Murphy, Frederick Joseph, Ag.	*Bangor*	Park St.
Myrick, Leroy Henry, Ce.	*East Machias*	Δ T Δ House
Nickerson, Arno Wilbur, Ch. Eng.	*Brewer*	Θ X House
Noyes, Garth Albert, Ee.	*Orono*	Forest Ave.
Nugent, William Robert, Ce.	*Portland*	401 H. H. Hall
O'Neil, Harry Dennis, Ce.	*Bangor*	Σ A E House
O'Rourke Francis, Ch. Eng.	*Saco*	Pond St.
Packard, Ansel Alba, Ee.	*Belfast*	Λ X A House
Packard, Marlborough, Ce.	*Sebec Lake*	404 H. H. Hall
Palmer, Guy Casley, Ag.	*Patten*	K Σ House
Park, Minnie May, He.	*Orono*	19 Pine St.
Peabody, Myron Columbus, Ag.	*Exeter, R. F. D. No. 1*	Σ X House
Perkins, Edward Adolphus, Ee.	*Old Orchard*	Σ X House
Phelps, Ferdinand Zanoni, Ch.	*Foxboro, Mass.*	Σ X House
Philbrook, Lawrence Eugene, Ag.	*Shelburne, N. H.*	B Θ Π House
Pierson, Howard Lester, Me.	*Lisbon Falls*	305 H. H. Hall
Plummer, Marion Elizabeh, He.	*Old Town*	Mt. Vernon House
Potter, Elmer Deming, Eh.	*Topsham*	311 H. H. Hall
Prentice, William Henry, Jr., Me.	*Round Pond*	309 Oak Hall
Purington, Clinton Everett, Ag.	*Portland*	K Σ House

Rendall, Raymond Eaton, Fy.	*Melrose, Mass.*	Θ X House
Robinson, Albert Lealand, Ag.	*So. Windham*	Θ X House
Robinson, Madeline Frances, Rm.	*Bangor*	Bangor
Roderick, Thaddeus Louis, Ch. Eng.	*Farmington*	Park St.
Rolfe, Clifford Merrill, Bl.	*Nobleboro*	Campus
Rollins, Harry Elwood, Ag.	*Bangor*	Φ K Σ House
Rudman, Samuel, Ce.	*Bangor*	Bangor
Ruffner, Charles William, Ag.	*Bangor*	K Σ House
Russell, Sibyl Lois, He.	*Orono*	80 Main St.
Sanborn, Oscar Harold, Ag.	*Weld*	Campus
Sawyer, Grace Ruth, Rm.	*Old Town*	Old Town
Shaw, Earle Eaton, Fy.	*Orono*	College St.
Sherman, Albion Franklin, Ec.	*Bar Harbor*	K Σ House
Silva, Richard Leslie, Ee.	*Provincetown, Mass.*	Σ N House
Skillin, Clifford Augustus, Me.	*So. Portland*	Θ X House
Small, Norman Clifford, Ce.	*Farmington*	Φ K Σ House
Smith, George Edwin, Ag.	*Hanover*	Σ A E House
Somes, Raymond Percival, Fy.	*Southwest Harbor*	Φ K Σ House
Stone, Harry Edward, Ee.	*Cornish*	16 Main St.
Tarr, Omar Fred, Ch.	*Auburn*	Θ X House
Thompson, Dorothy, Gm.	*Orono*	Main St.
Thompson, Gladys, Gm.	*Orono*	Main St.
Toole, Harry Sylvester, Ch. Eng.	*Bangor*	Bangor
Totman, James Emmons, Ag.	*Providence, R. I.*	Φ H K House
Trimm, Hattie Mae, Eh.	*East Corinth*	Forest Ave.
Vickery, Earle Wendell, Fy.	*Bangor, R. F. D. No. 1*	Σ X House
Webber, Walter Waitstill, Ch. Eng.	*Auburn*	B Θ Π House
Weymouth, Currier, Ee.	*Kingfield*	Δ T Δ House
Whitaker, Clifton Grover, Me.	*Bar Harbor*	Σ N House
Whittemore, James Arthur, Fy.	*Biddeford*	B Θ Π House
Whittier, John Lowell, Ag.	*Bangor*	Φ K Σ House
Wilbur, Elwood Morton, Ce.	*Sorrento*	Λ X Λ House
Wilkins, Clyde Lamkin, Ag.	*Notch*	Campus
Willett, Andrew Peter, Rm.	*Orono*	Orono
Winship, Evelyn, He.	*Auburn*	Mt. Vernon House
Woods, Basil G., Ch. Eng.	*Bangor, R. F. D. No. 7*	Bangor
Young, Mary Kathleen, Ed.	*Waldoboro*	24 Bennoch St.
Young, Muriel, Ed.	*Waldoboro*	24 Bennoch St.

FRESHMEN

Adams, Herbert Kendall, Ag.	*Bowdoinham*	Φ K Σ House
Allen, Lawrence Hall, Ag.	*South Windham*	Θ X House
Amos, Luther Newell, Ee.	*Houlton*	College St.
Anderson, Carl Albert, Ag.	*East Boston, Mass.*	210 H. H. Hall
Andrews, Harold Pierce, Fy.	*Monmouth*	408 Oak Hall
Backus, Clifford Whitmore, Ag.	*Wollaston, Mass.*	104 H. H. Hall
Barbour, Arthur Webb, Fy.	*Rockland*	Φ H K House
Barnes, John Lycurgus, Ce.	*Intervale, N. H.*	303 H. H. Hall
Bartlett, Burton Elliott, Ag.	*Orono*	College St.
Bayley, Charles William, Ag.	*Wells Beach*	Park St.
Beal, George Napoleon, Arts	*Jonesport*	1. College St.
Becker, Chester Francis, Bl.	*Attleboro, Mass.*	North Main St.
Beckler, Warren Bigelow, Jr., Ch.	*Auburn*	301 Oak Hall
Benson, Clyde Allen, Ch. Eng.	*Winthrop*	104 H. H. Hall
Berger, Samuel Solomon, Ch. Eng.	*Lawrence, Mass.*	410 H. H. Hall
Bernstein, Louis Abraham, Ce.	*Auburn*	212 Oak Hall
Berry, Leroy Nahum, Ag.	*South Bridgton*	Campus
Blair, Wellington Arthur, Fy.	*Waterville*	202 H. H. Hall
Blanchard, Arthur Nile, Ag.	*Cumberland Center*	Λ X Λ House
Blethen, Clarence Waldo, Pm.	*Foxcroft*	Δ T Δ House
Bower, Arthur John, Ag.	*Methuen, Mass.*	Σ A E House
Brackett, Altie Franklin, Ee.	*Berwick*	Λ T Ω House
Bragg, Daniel Pitkin, Ag.	*St. Albans, Vt.*	Φ H K House
Brannen, Francis, Ce.	*Berlin, N. H.*	104 H. H. Hall
Brasseur, Ralph Baldwin, Eng.	*Haverhill, Mass*	302 H. H. Hall
Brawn, Earl Robertson, Ce.	*So. Portland*	Σ N House
Brawn, Worthen Earle, Ch. Eng.	*Bath*	Park St.
Bridgham, Donald Greenwood, Ag.	*Auburn*	301 Oak Hall
Bristol, Grace Bidwell, He.	*West Hartford, Conn.*	Mt. Vernon House
Brookman, George Francis, Ee.	*Williamstown, Mass.*	Φ Γ Δ House
Brooks, Hubert Weslie, Fy.	*Norway*	Mill St.
Brown, Cecil Earl, Ec.	*Norway*	Φ H K House
Brown, Ruth Ellen, Eh.	*Brewer*	Mt. Vernon House
Burk, Frank Leon, Fy.	*Swampscott, Mass.*	111 H. H. Hall
Burke, John Andrew Aloysius, Me.	*Portland*	Λ T Ω House
Burton, Louis Russell, Fy.	*Bar Harbor*	209 H. H. Hall

Calderwood, Herbert Hale, Fy.	*Rockport*	College St.
Callahan, Raymond Murray, Ag.	*Sabattus*	210 Oak Hall
Came, Grace, Lt.	*Old Town*	Old Town
Campbell, Marshall Stephen, Ee.	*Boothbay*	Φ H K House
Card, Pliney Hazen, Eh.	*Meddybemps*	404 H. H. Hall
Carlisle, Percy James, Ee.	*Stillwater*	Stillwater
Carlson, Carl Gustave, Ee.	*Searsport*	204 Oak Hall
Carlson, Harry Louis, Ee.	*Searsport*	204 Oak Hall
Carter, Ray Milo, Ch.	*West Hawley, Mass.*	401 Oak Hall
Chapin, Francis Deering, Me.	*Saco*	Peters St.
Chaplin, Leola Bowie, Eh.	*Cornish*	University Inn
Chase, Chauncey Leo, Ce.	*Bangor*	Bangor
Cheney, Samuel Cox, Eh.	*Caribou*	111 H. H. Hall
Chick, Earle Littlefield, Me.	*Cornish*	102 H. H. Hall
Clark, Donald Simonton, Eng.	*Belfast*	B Θ Π House
Cobb, Philip Hacker, Eh.	*Denmark*	110 H. H. Hall
Cobb, Roland Hacker, Eng.	*Denmark*	110 H. H. Hall
Cobb, Sumner Chase, Ms.	*Portland*	Φ K Σ House
Cohoon, Raymond, Ce.	*Bucksport*	Σ A E House
Collins, Parkman, Abbott, Fy.	*Readfield Depot*	Θ X House
Coombs, Ralph Davis, Ch.	*Foxboro, Mass.*	Oak Hall
Copp, Lincoln Brackett, Ch.	*Cornish*	102 H. H. Hall
Cram, Abram Cousins, Ee.	*Limerick*	203 Oak Hall
Cram, Ernest Victor, Ce.	*Sanford*	401 H. H. Hall
Creighton, George Plummer, Ch. Eng.	*Thomaston*	Φ Γ Δ House
Crockett, Dwight Lyman, Ag.	*Freeport*	Θ X House
Crossland, Charles Edward, Ee.	*Springvale*	103 H. H. Hall
Crowell, Fred Donald, Ec.	*Bangor*	Bangor
Culhane, Gerald Joseph, Ch.	*Old Orchard*	Main St.
Curran, Lawrence Edward, Ch. Eng.	*Great Works*	Great Works
Danforth, Helen Lois, He.	*Bangor*	Mt. Vernon House
Davis, Kenneth Wayne, Ce.	*Monson*	112 H. H. Hall
Deering, Ralph Ozro, Ag.	*Bridgton*	Φ K Σ House
Dempsey, Edmund James, Ch. Eng.	*Mattapan, Mass.*	Σ X House
DeWitt, Carroll Melbourne, Me.	*Brewer*	Φ K Σ House
Dodge, Richard Boulsby, Ag.	*Machias*	Campus
Dole, George Elmer, Bl.	*Haverhill, Mass*	301 H. H. Hall

Dorsey, Llewellyn Morse, Ag.	*Augusta*	Σ A E House
Drake, Aubrey Willard, Ec.	*Albion*	A T Ω House
Drisko, Ralph Burton, Eng.	*Fairfield*	104 H. H. Hall
Dunham, Carroll Kenneth, Ag.	*Portland*	Park St.
Dunn, Arthur Wilfred, Ee.	*Yarmouthville* ..	Θ X House
Dutton, Philip Smith, Ch.	*Steuben*	401 H. H. Hall
Dyer, Curtis William, Bl.	*Cornish*	Σ N House
Dyer, Henry Lathrop, Arts	*Fryeburg*	303 H. H. Hall
Edmunds, Charles Storer, Bl.	*Bangor*	Bangor
Ellis, Alfreda, He.	*Belfast*	Wilson House
Emerson, Percy Daniel, Fy.	*Biddeford*	A T Ω House
Emery, Earle Leslie, Fy.	*Salisbury Cove*	Σ N House
Emery, Marion, He.	*Limerick*	Wilson House
Emmons, Albert Woodbury, Ec.	*Kennebunk*	Σ A E House
Farrar, Helen Wilcox, Eh.	*East Corinth*	Campus
Fides, Avery Meader, Fy.	*Orrs Island*	Φ H K House
Foster, Vernon Lord, Ag.	*Belgrade*	201 H. H. Hall
Fraser, Ralph Ervine, Ee.	*Presque Isle*	Φ H K House
Freese, Langdon Jackson, Ee.	*Bangor*	K Σ House
French, Frank Alexander, Ce.	*Wappingers Falls, N. Y.*	Θ X House
Frothingham, Thomas Warren, Ee.	*Portland*	Park St.
Garrison, George Harrison, Ee.	*Portland*	Φ Γ Δ House
Gerrish, Clarence Cobb, Ee.	*Brownville*	Φ H K House
Gerrish, Paul Herbert, Ce.	*Haverhill, Mass.*	202 H. H. Hall
Gerry, Laurel Osgood, Ec.	*Brownville*	A T Ω House
Getchell, Albert Ervin, Ce.	*Dallas*	104 H. H. Hall
Gilpatrick, Verner Elisha, Eh.	*Orono*	14 Bennoch St.
Godfrey, Noel Davis, Ec.	*South Lubec*	303 Oak Hall
Gonyer, Frances Louise, Rm.	*Littleton, N. H.*	104 Main St.
Gorham, William Joseph, Ag.	*Wilkes Barre, Pa.*	K Σ House
Grant, Albert John Minto, Ce.	*Long Cove*	212 H. H. Hall
Grant, Horace Leighton, Fy.	*Columbia Falls*	411 H. H. Hall
Gray, Albert Leroy, Ce.	*Westbrook*	Φ Γ Δ House
Greeley, Helen Margaretta, Arts	*Bar Harbor*	Colburn House
Green, Daniel Emerson, Ag.	*Brewer*	310 H. H. Hall
Greenwood, Russell Sanford, Ag.	*Presque Isle*	Φ H K House
Gribbin, Benjamin Herbert, Ce.	*Portland*	404 Oak Hall
Guiou, Elty Chester, Ee.	*Orono*	College St.

Hackett, Rhonello, Ec.	*Pittsfield*	B Θ Π House
Hague, Harold James, Ee.	*Old Orchard*	Orono
Hale, George Lester, Arts	*Belfast*	H. H. Hall
Hall, Bicknell, Jr., Ee.	*Chebeague Island*	Φ Γ Δ House
Hall, Sumner Augustus, Fy.	*Gloucester, Mass*	Δ T Δ House
Halvorson, Herbert Percival, Ce.	*Pawtucket, R. I.*	Σ X House
Hamilton, Guy Bradford, Ag.	*Thomaston*	Main St.
Hanly, Edward Kavanaugh, Ce.	*Portland, R. F. D. 4*	Λ X Λ House
Hanley, William Towne, Ee.	*Rumford*	Σ Λ E House
Hansen, George Edward, Fy.	*Worcester, Mass.*	103 Oak Hall
Harding, Raymond Hawthorne, Ch. Eng.	*Kennebunk*	College St.
Harmon, Frank Lorenzo, Ee.	*Lowell, Mass.*	Φ H K House
Harrison, Mary Violetta, Gm.	*Bangor*	College St.
Haskell, Weston Bradford, Ag.	*Auburn*	B Θ Π House
Hayden, Alfred Dorr, Ee.	*Key West, Fla.*	Λ X Λ House
Herrick, Carlton Sewall, Ag.	*South Brewer*	K Σ House
Higgins, Dorrice Mae, He.	*Brewer*	Colburn House
Higgins, Royal Grant, Ce.	*Bar Harbor*	Σ N House
Hill, Mark Langdon, Ch. Eng.	*Bath*	B Θ Π House
Hill, Roger Benson, Ch.	*Peabody, Mass.*	Σ N House
Hiller, Howard Bryant, Ag.	*Marion, Mass.*	Σ Λ E House
Holmes, Adrian Emery, Eng.	*Buckfield*	312 H. H. Hall
Holton, Lewis Sherman, Ag.	*Boothbay Harbor*	B Θ Π House
Hopkins, Bryant Lealand, Ce.	*North Haven*	401 H. H. Hall
Howard, Flora Adalaide, He.	*Bangor*	Mt. Vernon House
Hunt, Lilian Crosby, He.	*Old Town*	Old Town
Hurd, Everett St. Claire, Ee.	*Pittsfield*	Φ K Σ House
Hurley, Harold William, Ec.	*Wareham, Mass.*	Σ Λ E House
Hutchinson, Daniel Clair, Ag.	*Dover*	Park St.
Hyland, Edward Aloysius, Ag.	*Utica, N. Y.*	College St.
Ingraham, Edith Louise, Gm.	*Bangor*	Bangor
Jacobs, Maurice, Fy.	*Methuen, Mass.*	211 H. H. Hall
Jardine, Wilton Scott, Ce.	*Arlington, Mass.*	K Σ House
Jenkins, Howard Lawrence, Ag.	*Methuen, Mass.*	Orono
Jewett, Hazen Lyman, Ag.	*Skowhegan*	411 Oak Hall
Johnson, Carl Strong, Ag.	*Easthampton, Mass.*	409 Oak Hall
Johnson, Thorne Holman, Ee.	*Wayne*	306 Oak Hall
Jones, Frederic Paul, Ee.	*Biddeford*	302 H. H. Hall

Jones, Leewood Herbert, Arts	*Fairfield*	309 H. H. Hall
Jones, Melville Clark, Ag.	*Sabattus*	407 Oak Hall
Jones, Randall Palmer, Me.	*Rockland, R. F. D.*	107 Oak Hall
Jones, Walter Converse, Ec.	*Portland*	Σ N House
Jordan, Ruth Frances, He.	*Lisbon*	Colburn House
Kalloch, Charles Wyman, Eh.	*Rockland*	Φ Γ Δ House
Keating, Frederick Augustine, Ch.	*Salem, Mass.*	Θ X House
Kelley, Carroll William, Me.	*Orono*	Orono
Kierstead, James William, Fy.	*Mexico*	Σ X House
Kilburn, George Washington, Arts	*Fort Fairfield*	Σ X House
King, Harold Louis, Ec.	*Orono*	Orono
Knowlton, William Hewett, Ee.	*Rockland*	Φ Γ Δ House
Lane, Hazel, He.	*Lewiston*	Colburn House
Lavorgna, Albert, Ce.	*Canton*	409 H. H. Hall
LeBlanc, Elmer Alton, Arts,	*Veazie*	Veazie
Legal, Chapin, Ag.	*Calais*	Σ N House
Leighton, Lloyd Sumner, Ch. Eng.	*Cumberland Mills*	Park St.
Libby, Philip Nason, Fy.	*Gray*	304 H. H. Hall
Libby, Seth Emerson, Ee.	*Portland*	Φ H K House
Light, Brooks, Ag.	*Milton, Mass.*	312 Oak Hall
Littlefield, Waldemar Bunker, Me.	*Brewer*	Φ K Σ House
Locke, John Fernando, Ch. Eng.	*Mt. Vernon*	Bennoch St.
Lougee, Frances Marie, Arts	*Winterport*	Wilson House
Lovejoy, Raymond Harwood, Ag.	*New Sharon*	Main St.
Lovely, Harry Richard, Fy.	*Gardiner*	Φ Γ Δ House
Luce, Neil Glendon, Ag.	*Strong*	Orono
Lyons, Richard Thomas, Ch. Eng.	*East Weymouth, Mass.*	K Σ House
Mank, Nelson Fountain, Me.	*Portland*	Σ N House
Marble, Gerald Coker, Me.	*Skowhegan*	K Σ House
March, Ruth Evelyn, He.	*North Vassalboro*	University Inn
Marr, Carl Wellington, Eh.	*Waterville*	212 H. H. Hall
Martini, Mary Lillian, He.	*Orono*	Main St.
Mathieson, Donald Herbert, Ce.	*Rangeley*	College St.
Maxfield, Horatio Winfred, Me.	*Portland*	307 H. H. Hall
Mayo, Donald King, Ag.	*Southwest Harbor*	Φ Γ Δ House
McCabe, George Curtin, Eng.	*Kennebunkport*	304 Oak Hall
McCobb, Herbert Hodges, Ag.	*Center Lincolnville*	Α Τ Ω House
McCusker, Joseph Aloysius, Bl.	*Wappingers Falls, N.Y.*	Θ X House
McDonough, John Anthony, Ce.	*Lewiston*	Θ X House

McKown, Richard Edward, Me.	*Southport*	Σ X House
Mercier, Dorothy, Arts	*Princeton*	Wilson House
Merrill, Katharine Buffum, Eh.	*Orono*	100 Main St.
Merrill, Ralph Wells, Fy.	*Bangor*	K Σ House
Merryman, Roger Perry, Ce.	*Bangor*	Bangor
Metcalf, Edwin Samuel, Ee.	*Damariscotta*	111 Oak Hall
Mincher, Earle, Ch. Eng.	*Bangor*	Bangor
Moloney, Helen Carew, Eh.	*Orono*	Orono
Moody, Charles Leo, Fy.	*Monmouth*	407 Oak Hall
Moulton, Parker Nash, Fy.	*Bath*	Σ A E House
Mower, Clyde Fletcher, Ch. Eng.	*Dexter*	Park St.
Mower, Leland Monroe, Ce.	*Auburn*	303 Oak Hall
Mullen, Charles Emerson, Ch. Eng.	*Bangor*	Bangor
Murphy, William Robert, Eng.	*Old Town*	Old Town
Murray, Lewis Pope, Ch.	*Berlin Mills, N. H.*	Φ Γ Δ House
Needham, Stanley Francis, Arts	*Old Town*	Old Town
Newton, Max, Ee.	*Kents Hill*	North Main St.
Neckerson, Arno Wilbur, Ch. Eng.	*Brewer*	Θ X House
Nickerson, Clinton Augustus, Ec.	*Portland*	304 H. H. Hall
Norris, Helen Mary, He.	*Auburn*	Mt. Vernon House
Norton, George Chapman, Ag.	*Strong*	Oak St.
Nowell, Foster, Ee.	*Reading, Mass.*	Δ T Δ House
O'Connor, Denis Stanislaus, Bl.	*Biddeford*	302 H. H. Hall
O'Donoghue, William Florance, Fy.	*Lowell, Mass.*	Park St.
O'Leary, Edwin Dolan, Ce.	*Bangor*	B Θ Π House
Orcutt, Eugene Albert, Ce.	*Ashland*	Park St.
Orr, Homer Murtland, Ch.	*Old Town*	Old Town
Packard, Horace Candage, Ch.	*Portland*	408 Oak Hall
Page, Schuyler, Jr., Ee.	*Caribou*	Φ H K House
Park, Irwin James, Ce.	*Orono*	Orono
Parks, George Uriah, Fy.	*Suffield, Conn.*	104 Oak Hall
Parshley, David Hobbs, Ch.	*South Berwick*	A T Ω House
Partridge, Clara Estelle, He.	*Pemaquid Beach*	University Inn
Partridge, Herbert George, Arts	*Searsport*	204 H. H. Hall
Pemberton, Harold Sawyer, Ce.	*Groveland, Mass.*	Λ X A House
Pendleton, Raymond Ambrose, Fy.	*Brewer*	Φ K Σ House
Penney, Charles Clifton, Ag.	*Lincoln*	Δ T Δ House
Perry, John Howard, Ch.	*Lewiston*	Θ X House

Perry, Mildred Geneva, Eh.	*Bangor, R. F. D. 7*	Bangor
Peterson, Henry Andrew, Bl.	*Portland*	307 H. H. Hall
Phelps, Elizabeth Cornelia, He.	*Foxboro, Mass.*	Wilson House
Phillips, Stanley Gilkey, Ce.	*Westbrook*	Φ T Δ House
Pierce, Ralph Bartlett, Ch.	*Beverly, Mass.*	Σ X House
Pitman, Linwood True, Me.	*Fairfield*	207 Oak Hall
Pomeroy, John Mann, Me.	*Calais*	Σ N House
Porter, Alton Millett, Ag.	*South Paris*	202 Oak Hall
Post, Lawrence Leicester, Ce.	*Alfred*	310 H. H. Hall
Pratt, Harold Marshall, Fy.	*South Paris*	403 H. H. Hall
Preble, Leslie Edward, Ch. Eng.	*Saco*	Peters St.
Preti, Frank Peter, Ec.	*Portland*	Φ H K House
Pride, Ralph Howard, Ce.	*Westbrook*	Λ T Ω House
Reed, Gladys Gage, He.	*Bangor*	Colburn House
Reed, Harold Langdon, Ch.	*Lewiston*	207 Oak Hall
Reed, Stanley Lewis, Eng.	*Methuen, Mass.*	306 Oak Hall
Remick, Edward Carleton, Ee.	*Springvale*	410 H. H. Hall
Reynolds, William Eugene, Ag.	*Northeast Harbor*	Park St.
Rice, Charles Anthony, Bl.	*Uxbridge, Mass.*	K Σ House
Ricker, Ruth Merrill, He.	*Lisbon*	Colburn House
Ridley, James Stevens, Ee.	*Brunswick*	Park St.
Robbins, Leo Vetal, Ee.	*Fort Kent*	Φ Γ Δ House
Robie, Frederick, Ag.	*Gorham*	K Σ House
Robie, Mary Frederica, He.	*Gorham*	Colburn House
Robinson, Carl Elmo, Ag.	*Bangor*	Bangor
Robinson, George Campbell, Eng.	*Westbrook*	Δ T Δ House
Rodden, William Henry, Eng.	*Reading, Mass.*	Δ T Δ House
Rodick, David Owen, Ec.	*Bar Harbor*	Σ X House
Rokes, Laurence Burton, Me.	*Rockland*	107 Oak Hall
Rowley, Levi Thaddeus, Me.	*Hartford, Conn.*	Park St.
Russell, Edward Sebastian, Ag.	*Vinalhaven*	Σ X House
Russell, Merle Alton, Fy.	*Norway*	Φ K Σ House
Savage, Doris, He.	*Bangor*	Colburn House
Savage, Frank, Jr., Ec.	*Fairfield*	K Σ House
Sawyer, Dwight Leland, Ag.	*Saco*	Park St.
Sawyer, Ralph, Ee.	*Buxton*	105 Oak Hall
Sawyer, Randall Asa, Ag.	*Cumberland Center*	Λ X Λ House
Scribner, John Leslie, Ag.	*Plattsburg, N. Y.*	Bennoch St.

Shea, Thomas Francis, Eng.	*Bangor*	Bangor
Sherman, Fuller Gustavus, Ch.	*Randolph*	Δ T Δ House
Simpson, William Andrew, Ag.	*Marlboro, Mass.*	Σ N House
Skelton, William Larrabee, Fy.	*Lewiston*	Φ K Σ House
Smiley, James Harold, Eng.	*Bradford, Mass.*	403 H. H. Hall
Smith, Clarence Llewellyn, Me.	*Vinalhaven*	211 H. H. Hall
Smith, Donald Goold, Me.	*Portland*	Σ X House
Smith, Marshall Odell, Ch.	*Yarmouth*	North Main St.
Snell, Frank Albion, Ch. Eng.	*Portland*	405 Oak Hall
Stackpole, Miner Reginald, Ce.	*Sanford*	401 H. H. Hall
Stahl, Jerome Guttman, Fy.	*Berlin, N. H.*	Θ X House
Stephens, Frank Owen, Eh.	*Auburn*	210 H. H. Hall
Stephenson, Charles Lindsley, Fy.	*Orono*	Oak St.
Stevens, Raymond Randolph, Ag.	*Ashland*	1 Park St.
Steward, Raymond Benson, Ag.	*Portland*	310 Oak Hall
Stoddard, Stanley Waldron, Ee.	*Bingham*	Penobscot St.
Stoehr, Rudolph, Ag.	*Sabattus*	109 Oak Hall
Sturtevant, Jessie May, Eh.	*Milo*	Bennoch St.
Swanton, Carl Bartlett, Me.	*Milbridge*	103 H. H. Hall
Swett, George Francis, Ce.	*Williamstown, Mass.*	Φ Γ Δ House
Tabachnick, George Enoch, Ag.	*Portland*	412 H. H. Hall
Tebbets, Eugene Lester, Fy	*Auburn*	403 H. H. Hall
Thayer, Frank Laurence, Ch.	*Waterville*	Θ X House
Thomas, Roy Frank, Ag.	*Monson*	112 H. H. Hall
Tibbetts, Walter Isaac, Math.	*Old Town*	Old Town
Topham, John James, Bl.	*Springvale*	103 H. H. Hall
Tracy, Alton William, Ee.	*St. Albans*	206 Oak Hall
Travers, Robert James, Ee.	*Bangor*	Bangor
True, Paul Akers, Ee.	*Yarmouth*	309 H. H. Hall
Tufts, Orren, Ee.	*Kingfield*	Φ K Σ House
Varney, Harold Reuben, Eh.	*Winterport*	106 Oak Hall
Verrill, Philip Thompson, Ch. Eng.	*Cumberland Mills*	Σ X House
Wade, Richard Allston, Ag.	*Portland*	Δ T Δ House
Wadlin, George Knowlton, Ee.	*East Northport*	Λ X Λ House
Wahlenberg, William Gustavus, Fy.	*Suffield, Conn.*	104 Oak Hall
Wallace, Erville James, Ag.	*Pemaquid Falls*	309 Oak Hall
Ward, Donald Gordon, Ee.	*Portland*	Σ N House
Wardwell, Simon Murray, Ag.	*Auburn*	303 Oak Hall
Waterhouse, Russell Vale, Ag.	*Kennebunk*	Σ A E House

Waterman, Clarence Stanley, Ag.	*White Rock*	Σ X House
Watkins, Herbert Everett, Ch. Eng.	*Portland*	Δ T Δ House
Waugh, Harvey Cyrus, Me.	*Levant*	Σ N House
Webster, Clifton Blaisdell, Ch.	*Orleans, Vt.*	Σ A E House
Webster, William Clifford, Arts	*Gorham*	103 Oak Hall
Wentzel, Roy Alva, Ce.	*Livermore Falls*	204 H. H. Hall
West, Frank Raymond, Eng.	*Old Town*	Old Town
White, Earl Russell, El.	*Attleboro, Mass.*	North Main St.
Whitten, Andrew Bradbury, Fy.	*Berlin, N. H.*	212 H. H. Hall
Wilson, Dustin Whittier, Ce.	*Dover*	Park St.
Wilson, Rolla Tenney, Ee.	*Monson*	112 H. H. Hall
Winter, Earland Sumner, Ag.	*Kingfield*	410 Oak Hall
Wood, Frances Andrews, Rm.	*Bar Harbor*	Colburn House
Wood, Laurence Blanchard, Ag.	*Kingfield*	410 Oak Hall
Wood, Margaret Allen, Gm.	*Bar Harbor*	Colburn House
York, Clayton Elmer, Me.	*Claremont, N. H.*	A T Ω House
Zabe, Ferris Joseph, Ee.	*Bangor*	Bangor

SPECIALS

Andrews, Langdon Farrington, An.	*No. Fryeburg*	House
Bagdoyan, Baysar Manoog, Ag.	*Aintab, Turkey*	Campus
Bell, George Tolar Whitman, Arts	*Newtonville, Mass.*	No. Main St.
Bickford, Miretta Lydia, Lt.	*Orono*	Main St.
Brown, Clifford, Me.	*Portland*	310 Oak Hall
Brown, Olin Chellis, Ee.	*Bar Harbor*	Φ H K House
Chapman, Chauncey Wallace Lord, Fy.	*Old Town*	Δ T Δ House
Clement, Philip Poindexter, Ch.	*Bangor*	Bangor
Colcord, John Harold, Ag.	*Province Lake, N. H.*	110 Oak Hall
Congdon, Herbert Eugene, Arts	*Bangor*	Bangor
Crispin, Russell Milton, Ce.	*W. Somerville, Mass.*	Σ X House
Doak, Marthon, Ag.	*Belfast*	Φ Γ Δ House
Dodge, Ruth Lillian, He.	*Newburyport, Mass.*	University Inn
Doore, George Stanley, Fy.	*Dover*	Δ T Δ House
Dugan, Frances Edith, He.	*Bangor*	Bangor
Eldridge, Charles Wilson, Ag.	*Foxcroft*	Σ A E House
Erswell, Charles Sherman, Ch.	*Brunswick*	Θ X House
Fletcher, Robert Kemble, Ag.	*Waltham, Mass.*	College St.
Foster, Hoyt Davis, Arts	*Deer Isle*	303 Oak Hall

Folsom, Vernon Frederick, Bl.	*Stillwater*	Stillwater
Gray, Frank William, Jr., An.	*Jacksonville*	Campus
Heath, Herbert Milton, Me.	*Augusta*	Σ Λ E House
Hews, Ray Delma, Ht.	*Ashland*	Λ X A House
Hitchings, Samuel Lord, Ag.	*Orono*	Orono
Jackman, Ruth, He.	*Vanceboro*	Mt. Vernon House
Jewett, Rosalind May, Ee.	*Waterville*	Wilson House
Leathers, Emery Linwood, Arts.	*Hermon*	304 Oak Hall
MacIntire, Donald Josiah, An.	*Biddeford*	Σ A E House
McCue, William Coleman, Ed.	*Newport*	Newport
Mehann, Marcia Winifred, He.	*Old Town*	Old Town
Melincoff, John Henry, Fy.	*Lawrence, Mass*	412 H. H. Hall
Morse, Earle Howard, Ch.	*Auburn*	Fernald Hall
Nash, William Edmund, Ce.	*Concord, N. H.*	K Σ House
Niles, Eunice Hale, Ee.	*Hallowell*	Mt. Vernon House
Orne, Percy Freeman, Ce.	*Boothbay Harbor*	110 H. H. Hall
OLeary, Madeline Dolan, Rm.	*Bangor*	Bangor
Pierce, Henry Otis, Jr., Ee.	*Bangor*	Λ T Θ House
Randall, Harry Burnham, Ee.	*Milford*	Λ X A House
Rich, William Raymond, Ch.	*Gorham*	Δ T Δ House
Sargent, Frederick Thomas, Me.	*So. Brewer*	B Θ Π House
Sargent, Hannah Butman, He.	*Old Town*	Old Town
Sargent, Mary Elizabeth, Arts	*Alton*	Old Town
Sawyer, Charles Augustine, Me.	*Portland*	411 H. H. Hall
Sawyer, John Irving Bryant, Ch. Eng.	*So. Portland*	Φ Γ Δ House
Schneider, Anthony Percy, Jr., Ag.	*Jersey City, N. J.*	Φ Γ Δ House
Sherman, Clifford Parker, Jr., An.	*New Bedford, Mass.*	Φ Γ Δ House
Smith, Royal Howard Gould, Ee.	*Gorham*	Σ X House
Talbot, Philip Henry, Ag.	*Portland*	Σ X House
Thatcher, Hilda Ella, He.	*Bangor*	Bangor
Thomas, George Eliott, Ht.	*Lynn, Mass.*	406 H. H. Hall
Tibbetts, Harold Merrill, Ch.	*Bangor*	Θ X House
Tibbetts, Willard Ray, Ch.	*Bangor*	Bangor
Wallace, Earle Stockman, Ht.	*Corry, Pa.*	College St.

THE COLLEGE OF LAW

GRADUATE STUDENTS

Allan, George Herman, B. S. *Portland*
University of Maine, 1884

Bass, Frank Lyman, A. B., LL. B. *Bangor* 82 Third St.
Bowdoin College, 1907; University of Maine, 1910

Barwise, Mark Alton, LL. B. *Bangor* 101 Third St.
University of Maine, 1913

Bridges, Corril Ellsworth, LL. B. *Charlestown, Mass.*
Albany Law School, 1887

Brown, Leon Gilman Carleton, LL. B. *Milo*
University of Maine, 1905

Cartier, Arthur Jean Baptiste, LL. B. *Biddeford*
University of Maine, 1909

Clough, George Edwin, LL. B. *Palmer, Mass.*
University of Maine, 1904

Davis, Waldo Trevor, A. B., LL. B. *Worcester, Mass.*
Dartmouth College, 1901; University of Maine, 1905

Dudley, John Perley, LL. B. *Houlton*
Colby College; University of Maine, 1908

Foster, Walter Herbert, LL. B. *Boston, Mass.*
University of Maine, 1905

Frederici, Edmund, LL. M. *DuBois, Pa.*
Southern Normal University College of Law

Kennedy, Michael James, LL. B. *Woodland* 112 Sanford St.
University of Maine, 1913

Linehan, Daniel Joseph, LL. B. *Haverhill, Mass.*
University of Maine, 1905

Lord, Harry, LL. B. *Bangor* 82 Cumberland St.
University of Maine, 1902

Monroe, Edward Roy, LL. B. *Portland*
University of Maine, 1907

Noble, Ernest Eugene, A. B., LL. B. *Portland*
Colby College, 1897; University of Maine, 1913

Perkins, DeForest Henry, M. A., LL. B.
Portland
University of Maine, 1900, 1905; Illinois College of Law, 1906

Record, Lewis Stillman, Ph. B., LL. B.
Newport, N. H.
Brown University, 1902; University of Maine, 1905

Reid, Charles Hickson, LL. B. *Bangor* 60 Lincoln St.
University of Maine, 1903

Robinson, Curville Charles, LL. B. *New York City*
University of Maine, 1905

Seavey, Ernest Linwood, LL. B. *Lemongrove, Cal.*
University of Maine, 1908

Tertzag, Jacob Kevork, A. B., LL. B.
Lynn, Mass.
Euphrates, 1902; University of Maine, 1911

Toole, Christopher, LL. B. *Hartford, Conn.*
University of Maine, 1910

SENIORS

Bartlett, Charles Drummond Harvard University	*Bangor*	58 Cedar St.
Blackington, Carl Adams University of Maine	*Rockland*	5 Ohio St.
Brown, Lester Edward	*Cape Elizabeth*	176 Court St.
Cohen, Samuel	*Bangor*	305 Essex St.
Driscoll, Frank Gerald	*Concord, N. H.*	112 Sanford St.
Geary, Milton Roscoe Member of the Maine State Bar	*Bangor*	66 Vine St.
Gerrish, Maurice Sylvester University of Maine	*Melrose, Mass.*	The Lowder
Glass, Ralph Rigby West Point, 1904	*Bangor*	25 Fifth St.
Gleszer, Edward Isaac Trinity College; New York University Law School	*Hartford, Conn.*	70 Sanford St.
Goodspeed, Ernest Leroy, B. A. Bowdoin College, 1909	*Randolph*	7 Boynton St.
Hewes, Clyfton	*Saco*	396 Hammond St.
Hoar, Ellen Morancy Mary	*Barre, Vt.*	24 Ohio St.

Jewett, Donald Campbell University of Maine; Amherst College	*Cherryfield*	176 Court St.
Leonard, Charles Edward	*Haverhill, Mass.*	112 Sanford St.
Libby, Frank Milton	*Portland*	112 Sanford St.
Mountaine, James Barry	*Bangor*	21 Adams St.
Niles, Gladys Madeline	*Bangor*	56 Madison St.
O'Connor, James Gorman Member of the Maine State Bar	*Taunton, Mass.*	396 Hammond St.
O'Leary, Cornelius Joseph	*Bangor*	96 First St.
Patterson, Arthur Willis University of Maine	*Castine*	176 Court St.
Pease, Harvey Roscoe	*Cornish*	59 Cedar St.
Small, Fred Wakefield	*Steep Falls*	59 Cedar St.
Southard, Frank Elwyn, B. A. University of Maine, 1910	*Auburn*	148 Kenduskeag Ave.
Towle, James Roby	*Montpelier, Vt.*	115 Second St.
Weick, Carl Alfred	*Springfield*	59 Cedar St.
Whitney, Clarence Alden	*Portland*	Σ X House, Orono

JUNIORS

Ashworth, George Robert Bowdoin College	*Waldoboro*	145 Center St.
Cohen, Ada Migowski	*Bangor*	43 East Summer St.
Frizzell, Jay Hobart	*Groveton, N. H.*	223 Ohio St.
Frost, Clark Bradley	*Mexico*	10 Cedar St.
Hamilton, John Burton Boston University Law School	*Lexington, Mass.*	25 Fourth St.
Isaacson, Benjamin	*Auburn*	25 Fourth St.
King, Robert Parson, B. A. Bowdoin, 1912; Harvard Law School	*Ellsworth*	176 Court St.
Moody, Howard Clifton	*North Yarmouth*	79 Summer St.
Pettingill, Lawrence Adlai	*Enfield, N. H.*	79 Summer St.
Shaw, Harry Maitland	*South Paris*	96 Cedar St.
Sleeper, Roger Davis	*South Berwick*	173 Ohio St.
Tirrell, Frank A., Jr.	*Quincy, Mass.*	10 Cedar St.
Torrey, Merrill Edson	*Easthampton, Mass.*	173 Ohio St.
Weaver, Ernest Linwood	*Ashland*	145 Center St.
Welch, Herbert John	*Portland*	96 Cedar St.
Williams, William Earl	*Bangor*	25 Fourth St.
Woolson, Raymond Travena	*Lisbon, N. H.*	19 Hudson St.

FIRST YEAR

Bieler, Alexander Bert,	*New York City*	75 Pine St.
Burkett, Franz Upham, B. A. Bowdoin College, 1911	*Union*	38 Ohio St.
Campbell, Murdo Alexander	*Graniteville, Vt.*	62 High St.
Caswell, George	*Weeks Mills*	118 Columbia St.
Crahmer, Harris Samson	*Bangor*	25 Essex St.
Crommett, Earl Erwood	*Ridlonville*	42 Court St.
Derrah, Floyd Mason	*Portland*	112 Sanford St.
Dubee, John Raymond	*Haverhill, Mass.*	Y. M. C. A.
Fullerton, Edward Grier Lafayette College	*New Haven, Conn.*	Y. M. C. A.
Gallagher, James Augustine	*Bangor*	34 Elm St.
Garakian, John Abraham, B. A. Robert College, 1909	*Bardezag, Turkey*	28 Second St.
Harlow, Charles Franklin	*Gorham*	59 Cedar St.
Harvey, Joseph Edmond	*Saco*	59 Cedar St.
McParland, Bernard Joseph Middlebury College	*Lawrence, Mass.*	16 Sanford St.
Mathews, Walter Ellwyn, B. A. Bates College, 1911	*St. Albans*	316 Hammond St.
Moren, Miller Bernard Purdue University	*Lowville, N. Y.*	38 Ohio St.
O'Leary, Charles John	*Bangor*	53 East Summer St.
Peterson, Harry Leland	*Danielson, Conn.*	59 Cedar St.
Prout, Everett Richard	*Quincy, Mass.*	Y. M. C. A.
Quine, James Patrick	*Bangor*	184 Forest Ave.
Reed, Harold LeRoy	*Northeast Harbor*	42 Court St.
Schooner, Henry	*Milford, Mass.*	Y. M. C. A.
Towle, Horace Hamblen, Jr. University of Maine	*Portland*	5 Ohio St.
Weeks, Thomas Nathan	*Waterville*	Y. M. C. A.
White, Walter Arthur	*Worcester, Mass.*	Y. M. C. A.
Whitmore, Annie Belle	*Buckfield*	70 Sanford St.
Wing, Earl Lytton, B. A. Bowdoin College, 1910	*Kingfield*	59 Cedar St.

SPECIALS

Bartlett, Charles Hammatt, A. B. Harvard University, 1882	*Bangor*	58 Cedar St.
Cherepy, Joseph Lambert	*Passaic, N. J.*	42 Court St.
Clark, Joseph Lawrence	*Waterville*	316 Hammond St.
Conquest, Edward James	*Bangor*	86 Sidney St.
Cyr, John Alphonse	*Bangor*	243 Center St.
Ferry, John Timothy	*Bangor*	36 Walter St.
Gray, Granville Chase	*Brewer*	
Hanley, Michael John	*Bangor*	101 Fern St.
Hurley, Martin Francis University of Maine	*Bangor*	50 Walter St.
Lewis, John Bowdoin College	*Skowhegan*	59 Cedar St.
McDonald, Peter	*Rumford*	145 Center St.
McGrath, Thomas Judson, Jr.	*Bangor*	41 1-2 Pine St.
Miller, Fred Roger	*Waldoboro*	145 Center St.
Singleton, Sarah	*Bangor*	393 State St.
Sullivan, John A.	*Nashua, N. H.*	396 Hammond St.
Thompson, Nathan	*Portland*	So. Brewer
Walker, Fred Dudley, Jr.	*Springfield, Mass.*	265 Main St.
Wood, Ralph Kimball	*Bangor*	145 Center St.

TWO YEARS PHARMACY

SECOND YEAR

Baldwin, Arthur George	*Reading, Mass.*	Δ T Δ House
Fortier, Francis Edward	*Orono*	37 Broadway
Hillberg, Walter Reynold	*Brockton, Mass*	K Σ House
Lynch, Thomas Augustine	*Bangor*	Bangor
Ouilette, Paul	*Caribou*	305 H. H. Hall
Paul, George Boss	*Dover, N. H.*	111 Oak Hall
Turmelle, Wilfred Joseph	*Rochester, N. H.*	Φ H K House

FIRST YEAR

Bullard, Morton Leonard	*Dexter*	311 H. H. Hall
Burke, John Wynne	*Randolph*	Park St.
Corrigan, William Joseph	*Millinocket*	South Brewer
Cruz de la, John Raymond	*Colombia, S. A.*	Orono

Fletcher, Fremont Benedict	*Augusta,*	Mill St.
Frye, Francis Henry	*Brewer*	Brewer
Gillis, Allan Philputt	*Lubec*	311 Oak Hall
Johnson, Oscar	*Monson*	112 H. H. Hall
Lawton, Daniel Edwin	*Southwest Harbor*	202 H. H. Hall
Malloch, Arthur	*Lubec*	311 Oak Hall
Rowe, Percy Daniel	*Island Falls*	14 Bennoch St.
Van Dyke, Percy James	*McIndoes, Vt.*	College St.

HOME ECONOMICS

SECOND YEAR

Clapp Grace Elizabeth	*Waterville*	Mt. Vernon House
Flint, Edith	*Baldwin*	Mt. Vernon House
Harrigan, Ethel	*Bangor*	Bangor
Lewis, Alice Marguerite	*Gardiner*	Mt. Vernon House
Leonard, Mary Frey	*Lewiston*	University Inn

FIRST YEAR

Bright, Elizabeth Mason	*Bangor*	Mt. Vernon House
Haley, Geneva Brackett	*Cornish*	University Inn
Jones, Frances Myrtle	*Bangor*	Bangor
Scrimgeour, Hazelwood	*Lewiston*	Colburn House
Soper, Helen Louise	*Waterville*	University Inn
Wells, Dorothy	*Christmas Cove*	Coburn House

SCHOOL COURSE IN AGRICULTURE

SECOND YEAR

Bradford, Alden Western	*Sebec Station*	Old Town
Chalmers, Arthur Elmer	*Albion*	103 H. H. Hall
Clark, Archie Donald	*East Corinth*	203 H. H. Hall
Hawkes, John Carroll	*South Windham*	Campus
Johnson, Joseph Henry	*Waltham, Mass.*	Park St.
Kendrick, Frank Carroll	*Biddeford*	204 H. H. Hall
Lincoln, Lionel Gilman	*Charleston, R. D. No. 1*	Main St.
Shaw, Harold Joseph	*Sanford*	Campus

Sidelinger, Alfred Henry	*Nobleboro*	Park St.
Small, Sylvanus Cobb	*Charleston*	College St.
Talbot, Jones Harold	*East Machias*	Campus
Verrill, Floyd	*Brunswick*	Orono
Ward, Linton Bartlett	*Shirley, Mass.*	Main St.
Wilcox, Carroll Eugene	*Morgan, Vt.*	16 Main St.
Wilcox, Clyde Sumner	*Morgan, Vt.*	

FIRST YEAR

Adams, Merle	*Canton Point*	201 H. H. Hall
Allen, Herbert Marsena	*Bangor*	404 H. H. Hall
Atwood, Jordan Fred	*Sabattus*	109 Oak Hall
Brown, Verner Thayer	*West Pembroke*	411 H. H. Hall
Carlow, Lewis Allen	*Brewer*	403 Oak Hall
Cawley, Henry Loel	*Peabody, Mass.*	209 Oak Hall
Corthell, Charles Lewis	*Eastport*	406 Oak Hall
Crowell, David	*Dorchester, Mass.*	310 H. H. Hall
Dearborn, Philip Murray	*Cape Elizabeth*	
Eaton, Richard Chandler	*Exeter*	410 H. H. Hall
Fisk, Theodore Orson	*Worcester, Mass.*	411 Oak Hall
Harris, Frank Waterman	*Milo*	208 Oak Hall
Hosmer, Roy E.	*East Wilton*	Campus
Morrison, Lewis Emery	*LaGrange*	202 H. H. Hall
Norton, Rupert Stacy	*Kezar Falls*	208 Oak Hall
Packard, Ralph	*Norridgewock*	Campus
Sherry, Philip Lindsay	*Portland*	Park St.
Walker, Frank Merrill	*Saco*	Peters St.
Wilder, John Bickford	*Norridgewock,*	Park St.
Willard, Mary Ellen	*Llanerch, Penna.*	Wilson House

SUMMER TERM

Alister, Lillian Elizabeth Lowell Normal School	*Lowell, Mass.*
Alkazin, David Joseph	*Old Orchard*
Ames, Leroy Winfield, B. A. University of Maine, 1910	*Bangor*
Andrews, Robert Wilbur	*West Pembroke*
Babcock, Clara Bernice	*Bangor*

Barker, Corinne Maude	*Bangor*
Barrows, Lewis Orin	*Newport*
Bartlett, Emily May, B. A. University of Maine, 1912	*Orono*
Bayer, Harry Lewis	*Bangor*
Bickford, Miretta Lydia	*Orono*
Bigger, Elmer Rodgerson	*Monson*
Bragg, Alfred Orman	*Foxcroft*
Bray, Paul DeCosta	*Turner*
Burr, Charles Washington	*Northeast Harbor*
Chadbourne, Ava Harriet Bates College	*Mattawamkeag*
Chow, Ming Massachusetts Institute of Technology	*Kiangsoo, China*
Colbath, Muriel Eva	*Hampden*
Coyne, Albert Leo.	*Worcester Mass.*
Dage, Zu Chi	*Shanghai, China*
Darrow, William Hinds, A. B., A. M. Cornell University; M. S. University of Maine	*Middlebury, Vt.*
Day, Letitia Elizabeth, B. A. University of Maine, 1911	*Brewer*
Dewitt, Carroll Melbourne	*Brewer*
Dinsmore, Harold Lee	*Hebron*
Dolan, Walter James	*Worcester, Mass.*
Dore, Edward Albert	*Bangor*
Dorsey, Llewellyn Morse	*Taunton, Mass.*
Douglas, Chester Augustine, A. B. Bates College, 1911	*Lisbon*
Drew, Ernest Claude, B. S., M. S. University of Vermont, 1909	*Orono*
Eckstorm, Paul Frederick	*Brewer*
Eldridge, Charles Wilson	*Foxcroft*
Emerson, Wilbur Merritt	*Bangor*
Everett, Sarah Ruth, A. B. Boston University	*Worcester, Mass.*
Farnham, Walter Elwood	*Orono*
Faulkner, William Thomas	*Greene*
Files, Frederick Whitney	*Cornish*

Fillmore, Annie May	*South Cushing*
Fish, Ruth Stevens	*Readfield*
French, Norman Richard	*Fort Fairfield*
Gay, Thomas Edward, A. B. Bowdoin College	*Auburn*
Gray, Ernest Linwood	*Mars Hill*
Gray, Roland Corydon	*Orono*
Hall, Robert Holyoke	*Brewer*
Harrigan, Ethel Elizabeth	*Bangor*
Harriman, Royden Henry, B. S. University of Maine	*Bangor*
Haskell, Marion	*Steuben*
Hayes, Alden Burgess	*Bangor*
Heath, Herbert Milton, Jr.	*Augusta*
Hebard, William Everett, B. A. University of Maine, 1912	*Southbridge, Mass.*
Higgins, Oswald Bennett	*Sewaren, N. J.*
Hill, William Barlow	*Gorham*
Hodgdon, Wilbert Clary	*Wiscasset*
Hodgins, Laura Pearl	*Calais*
Holmes, Adrian Emery	*Buckfield*
Holt, Frank Ashley	*Bangor*
Hunt, Lillian Crosby	*Old Town*
Jones, Carrol Clair	*Solon*
Jones, Harold Libby	*Corinna*
Kelley, Henry Woodhull	*Bangor*
Jordan, Cora Abbie	*Seal Harbor*
Kimball, William Earle	*South Paris*
Kirk, George Edwin	*Bar Harbor*
Kirstein, Augusta Prinz	*Bangor*
Lanpher, Mrs. Bessie Mary	*Foxcroft*
Lanpher, Stacy Clifford, B. A. University of Maine, 1908	*Foxcroft*
Latno, Arthur Pierre	*Bradley*
Libby, Seth Emerson	*Portland*
Linscott, Edward Lyon	*Bar Harbor*
Littlefield, Angie May	*Old Town*
Lucas, Warren Stanhope	*Foxcroft*
MacIntire, Donald Josiah	*Biddeford*

Maines, Esca Allan	*Norway*
Makanna, Nicholas Philip	*Bangor*
Martini, Mary	*Orono*
Mathews, Wilbur Leonard	*Berwick*
McAvey, Liela Joyce	*Bangor*
McGinnis, Henry James	*Waterville*
McKee, Mary Noyes	*Orono*
McLaughlin, Percy Daniel	*Patten*
McQuaide, Thomas Wilson	*Mt. Vernon*
Miller, Harvey Daniel	*Bangor*
Mitchell, Frances Ricker	*Orono*
Morey, Carl	*Schenectady, N. Y.*
Morse, Earle Howard	*Auburn*
Morse, Horace Gray	*Bath*
Murray, Paul Elmer	*Skowhegan*
O'Donovan, Patrick John	*Orono*
Nash, Elizabeth Delia, A. B. Boston University, 1912	*Addison*
O'Neil, Joseph Carter, A. B. Bowdoin College, 1912	*South Portland*
Park, Minnie May	*Orono*
Partridge, Herbert George	*Searsport*
Perkins, Herman Greenville	*Madison*
Philbrook, Beulah Frances	*Brewer*
Philbrook, Philip Edwin	*Woodfords*
Pierce, Henry Otis	*Bangor*
Redman, Edward Sanderson, Ph. C. University of Maine, 1913	*Corinna*
Richardson, Lester Lary	*Old Orchard*
Robertson, Clarence Amasa	*St. Albans*
Robinson, Madeline Frances	*Bangor*
Rounds, Gerald Arlester	*Peaks Island*
Rowe, Frank Davis, A. B. Bowdoin College	*Warren*
Russell, Asenath Helen	*Orono*
Sancton, John Edward	*Old Town*
Sanders, David Tilden	*Greenville*
Sawyer, John Irving Bryant	*South Portland*

Sawyer, Leon George	*Bridgton*
Severance, Amanda Bailey, B. A. University of Maine, 1913	*Old Town*
Sheridan, Philip Brinsley	*Salem, Mass.*
Silva, Richard Leslie	*Provincetown, Mass.*
Slocum, Paul Frederick	*New York City*
Thompson, Dorothy	*Orono*
Thompson, Gladys	*Orono*
Tibbetts, William Herbert	*Stillwater*
Timberlake, Carl Billings, A. B. Bowdoin 1912	*Marion, Mass.*
Todd, Arthur Lee	*Sherman Mills*
Tracy, Marion Elaine	*Winter Harbor*
Treat, Gladys Evelyn	*Winterport*
Wescott, Guy Raymond	*Rumford*
Weymouth, Florence Frances	*Bangor*
Whelan, Carl Joseph	*Island Falls*
Whelan, Mame Anna	*Island Falls*
Whitcomb, Charles Floyd	*Farmington Falls*
Whiteside, Thomas, A. B., S. T. B. Boston University	*Orono*
Willett, Alfred Peter	*Orono*
Woodsum Edmund Nugent	*Oakland*
Worster, Dora Imogene	*Bangor*
York, George James	*Yarmouthville*
Young, Muriel	*Waldoboro*

SHORT COURSES

DAIRYING AND GENERAL AGRICULTURE

Allen, Raymond	*Jay*
Allen, Clyde L.	*Skowhegan*
Apollonio, Donald L.	*West Gouldsboro*
Brown, C. E.	*Center Belmont*
Gray, Harrison M.	*Belmont*
Hamlin, Albert W.	*South Waterford*
Harding, Harry	*Hampden Highlands*
Hamlin, Carl S.	*Harrison*
Hartwell, A. L.	*Stetson*

Merrill, Joseph A.	*Solon*
Millett, H. A.	*Old Town*
Searles, Joseph	*Brownille*
Smith, Mrs. Mary J.	*Monmouth*
Thompson, Wm.	*Bangor*
Rush, J. H.	*Benedicta*
Wallingford, B. H.	*Auburn*

HORTICULTURE

Bissell E. H.	*Brewer*
Curtis, Colby	*Bangor*
Gray Harrison M.	*Belmont*
Keene E. M.	*Hebron*
Magee, Roscoe S.	*Unity*

POULTRY HUSBANDRY

Apollonio, Donald L.	*West Gouldsboro*
Earle, Ardra J.	*Lewiston*
Keening, H. L.	*Winthrop*
Gee, Alberto H.	*Lewiston*
Longfellow, Lutie M.	*Orono*
Torrens, Willis A.	*Bangor*
Trott, Milton C.	*Woolwich*
Ware J. Putnam	*Waterville*
Warren, J. Earle	*Harrison*

GENERAL SUMMARY

FACULTY

President	1
Professors	41
Associate Professors	11
Assistant Professors	12
Instructors	41
Lecturers	7
Miscellaneous	13
Total	126

College of Agriculture	25
College of Arts and Sciences	41
Agricultural Experiment Station	14
College of Law	11
College of Technology	28
Officers common to all Colleges	7
	126

STUDENTS

Graduate Students	13
Seniors	95
Juniors	144
Sophomores	165
Freshmen	322
Specials	52

General Summary

College of Law, Graduate Students	23	
Seniors	26	
Juniors	17	
First Year	27	
Specials	18	111
Two Years Course in Pharmacy, Second Year	7	
First Year	12	19
Two Years Course in Home Economics		
Second Year	5	
First Year	6	11
School Course in Agriculture		
Second Year	15	
First Year	20	35
Summer Term		127
Winter Courses		
Dairying and General Agriculture	16	
Horticulture	5	
Poultry Husbandry	9	30
		1124
Duplicates		66
Total		1058

CLASSIFICATION BY RESIDENCE

Maine, by counties:	
Androscoggin	47
Aroostook	33
Cumberland	121
Franklin	23
Hancock	43
Kennebec	55
Knox	31
Lincoln	19
Oxford	41
Penobscot	261
Piscataquis	28
Sagadahoc	9
Somerset	26

Waldo	24	
Washington	28	
York	50	839
California	1	
Connecticut	18	
Florida	1	
Massachusetts	132	
New Hampshire	26	
New Jersey	3	
New York	11	
Pennsylvania	9	
Rhode Island	2	
Vermont	9	
West Virginia	1	213
Argentina	1	
China	2	
Columbia	1	
Turkey	2	6
		1058

CLASSIFICATION BY COLLEGES

College of Agriculture	328	
College of Arts and Sciences	216	
College of Law	111	
College of Technology	403	
		1058

CLASSIFICATION OF CANDIDATES FOR DEGREES

College of Agriculture	225	
College of Arts and Sciences	146	
College of Law	93	
College of Technology	384	
		848

INDEX.

	PAGE
Absence from examinations....	41
Administration, officers of.....	9
Advanced standing	49
Admiralty	186
Admission	49
to College of Law	184
Agricultural Chemistry	102
Agricultural Engineering	104
Agricultural Experiment Station	236
Council	8
Agriculture, College of.....	72
Agronomy courses	94
curriculum	76
Alpha Zeta	37
Alternating currents	223
Alumni Advisory Council.....	245
Alumni associations	246
Animal Industry courses	96
curriculum	77
Appointments	211
Archaeology	154
Architecture	158
Art	158
Art Museum	34
Arts and Sciences, College of..	114
Associations	35
Astronomy	164
Athletic field	32
Bacteriology	101
Battalion	250
Bibliography	128
Biological Chemistry	102
Biology courses	129
entrance	65
Botany	130
Buildings and equipment	22
Business Law	133
Calendar	3
Central heating plant	31
Cercle Francais	36
Certificate, admission by.....	50
Certificates in Agriculture.....	87
Chemical Engineering curriculum	193
Chemistry courses	209
curriculum	195
entrance	65
Civil Engineering courses.....	215
curriculum	197
Commencement exercises, 1913..	252
Committees of the Faculty.....	19
Cookery	109
Correspondence courses	90
Criminal Law	187
Curricula	68
Agriculture	75
Agronomy	76

	PAGE
Animal Industry	77
Arts and Sciences	117
Chemistry	198
Chemical Engineering	193
Civil Engineering	197
Electrical Engineering	200
Forestry	83
Graduate	118
Home Economics	86
Horticulture	79
Law	186
Mechanical Engineering	203
Pharmacy	206
Dairy courses	78
Winter courses	89
Debate	142
Declamations	141
Sophomore prize	48, 141
Degrees	43
advanced	44
Degrees conferred, 1913	254
Deposits	47
Dormitories	46
Drawing	229
Economics	133
Education courses	137
Electrical Engineering courses	220
curriculum	200
Embryology	131
Endowment of the University	22
English courses	140
entrance	55
English Literature	143
Entomology	128
Entrance	50
Essays	142
Establishment of the University	19
Evidence	188
Examinations, arrearage	42
entrance	51
Expenses	45, 185
Experiment Station	200
Extension Lecture courses	119
Extension work in Agriculture	90
Faculty, University	10
Agriculture	72
Arts and Sciences	114
Experiment Station	236
Law	183
Technology	191
Farm Management	104
Fees, laboratory	46
Forestry courses	105
curriculum	83
Fraternity houses	31
French courses	176
entrance	58
Geological collection	33
Geology	103
Junior exhibition	48
speakers, 1913	248
Kidder scholarship	48
Kittredge loan fund	47
German courses	151
entrance	60
Gothic	152
Graduate curricula	118
Graduation, requirements for	68
Greek courses	154
Greek architecture	158
Gymnasium	40
Herbarium	33
Histology, Animal	130
Plant	131
History courses	158
entrance	63

	PAGE
Home Economic courses	109
curriculum	84
short courses	86
Honorary societies	37
Honors	42
Conferred, 1913	248
Horticulture courses	112
curriculum	79
Hydraulics	217
Income of the University	22
Industrial Chemistry	212
Infirmary	31
Insurance	188
Journalism	118
Junior exhibition	48
speakers, 1913	248
Kidder scholarship	48
Kittredge loan fund	47
Laboratory charges	46
Landscape Gardening	113
Latin	160
Law, College of	183
Least Squares	174
Lectures, Summer Term	242
Library	27, 32
Loans	47
Logic	169
Lumbering	107
Machine Design	228
Maine Masque	36
Major instructors	116
Materia Medica	232
Mathematics courses	163
entrance	63
Mechanical Engineering courses	225
curriculum	203
Mechanics	230
Mechanics and Drawing	229
Medicine, preparation for	117
Meteorology	172
Military Science	39
courses	233
Museum	33
Observatory	27
Optics	173
Organic Chemistry	211
Organization of the University	67
Organizations	35
Pedagogy	137
Pharmacy	231
curricula	206
Phi Kappa Phi	37
members	248
Philosophy	169
Physical Chemistry	212
Physical Geography	65
Physical Training	40
courses in	234
Physics courses	171
entrance	65
Physiology	130
Political Economy	133
Poultry Husbandry courses	99
Power House	31
Prescriptions	232
Prizes	48
awarded, 1913	250
Psychology	170
Public Speaking	141
Publications	37
Reading room	32
Regulations of the University	41
Reports of standing	42
Required courses	68
Requirements, for admission	50
for graduation	68
Rhetoric	142
Romance Languages	176

	PAGE
Roman Numismatics	163
Roman Philosophy	162
Rooms	46
Round Table	36
Rule of conduct	41
Sanskrit	163
Scholarship honors	42
Scholarships	48
School Course in Agriculture	87
Sewing	110
Short Courses in Agriculture	89
Silviculture	106
Societies	35
Sociology	134
Sophomore prize declamations	48, 141
speakers, 1913	248
Spanish	178
Steam Engineering	229
Students, catalog of	260
classification of	294
number of	296
standing of	42
Studies, quota of	42
Structures	218
Summer Term	241
expenses	243
Surveying	215
Tau Beta Pi	37
Technology, College of	191
Faculty	191
Theology, preparation for	117
Theses	44
Torts	190
Treasurer	9
Trustees, Board of	7
executive committee of	7
Tuition Charges	45
University, history of	19
building and equipment	22
bulletins	37
endowment	22
establishment	19
location	22
object	19
Organization	67
Veterinary Science	101
Winter courses	89
Woodwork	225
Women, admission of	50
Worship, public	41, 242
Young Men's Christian Association	36
Young Women's Christian Association	37
Zoology courses	132
collections	33

378.741
DUPLICATE

THE MAINE BULLETIN

VOL. XVII OCTOBER, 1914 NO. 2

JOHN CARL LIBRARY

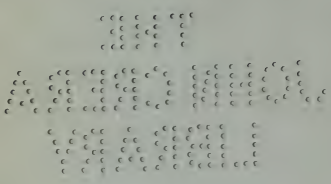
CATALOG

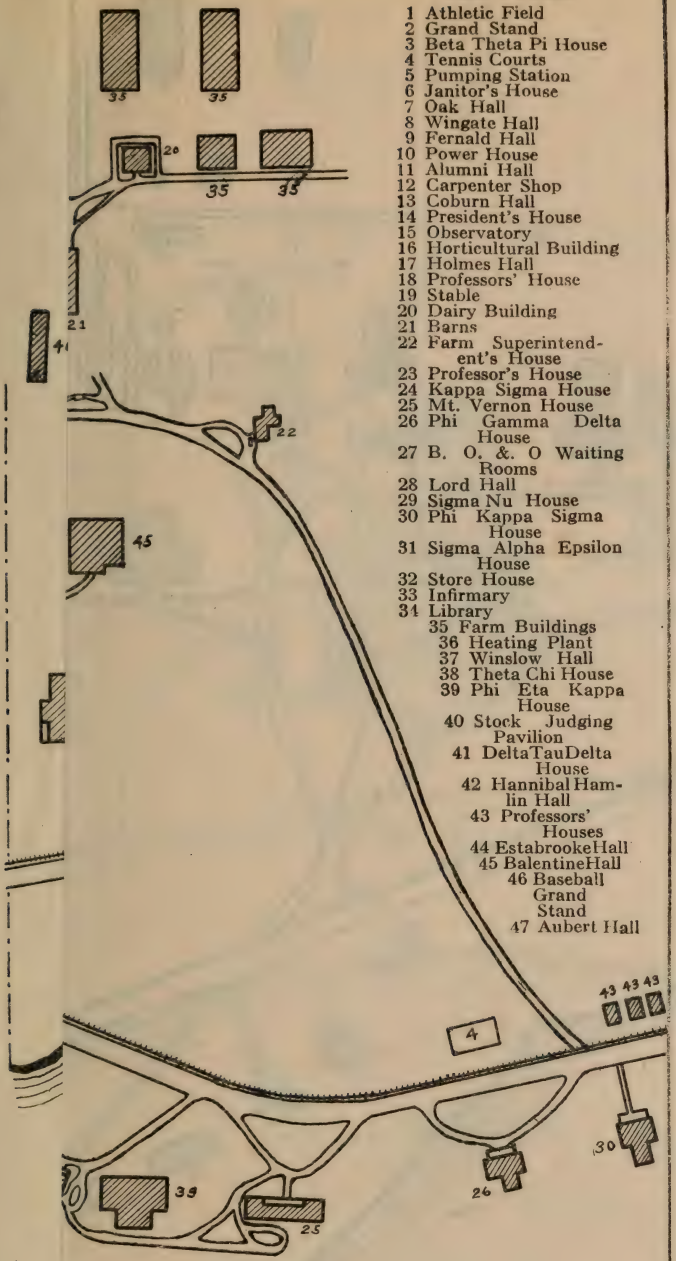
OF THE

UNIVERSITY OF MAINE

1914-1915

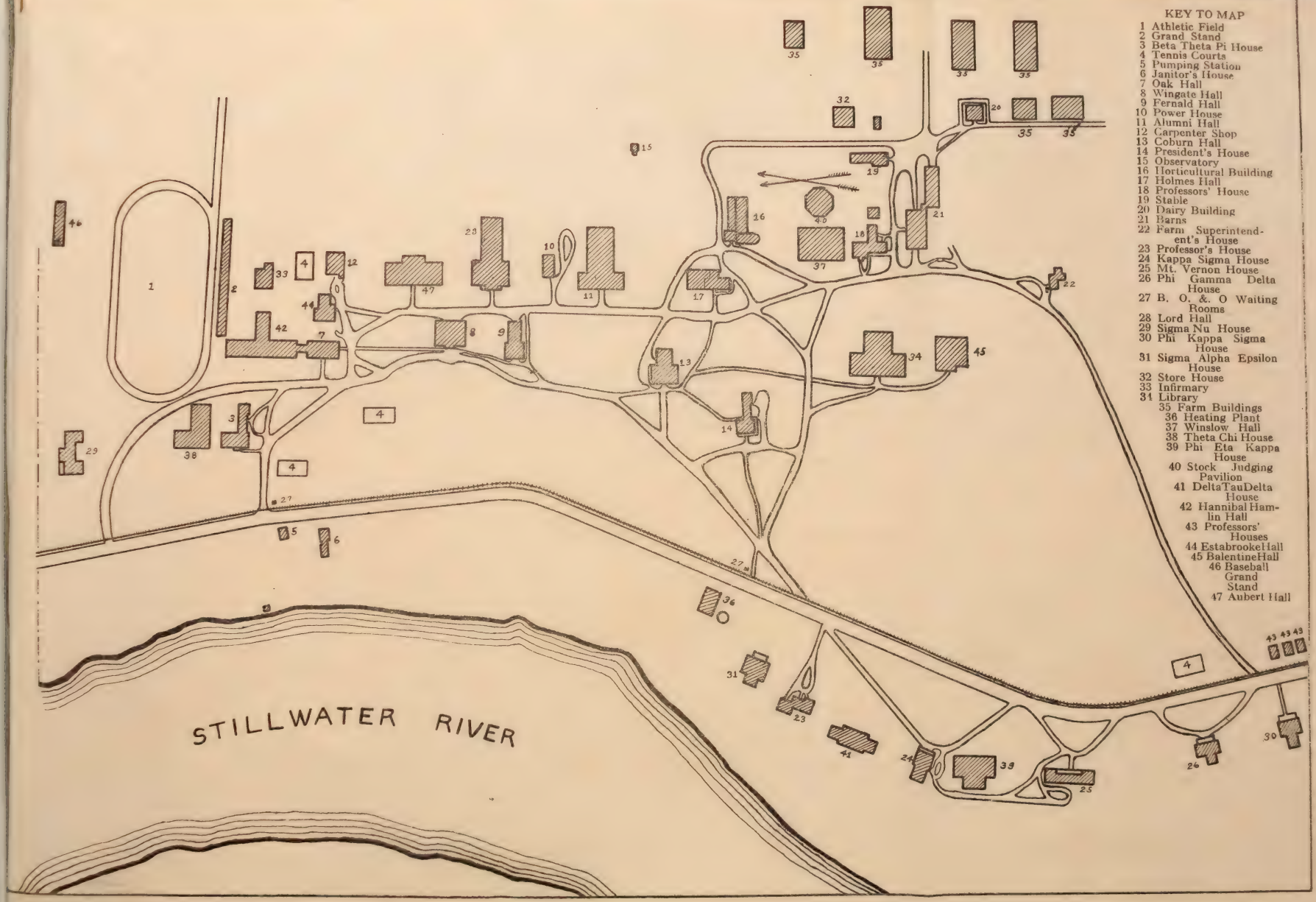
Published monthly during the academic year by the University
Entered at the Orono post office as second class matter





KEY TO MAP

1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Carpenter Shop
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' House
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. &. O Waiting Rooms
28 Lord Hall
29 Sigma Nu House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Store House
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 DeltaTauDelta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 EstabrookeHall
45 BalentineHall
46 Baseball Grand Stand
47 Aubert Hall


KEY TO MAP
1 Athletic Field
2 Grand Stand
3 Beta Theta Pi House
4 Tennis Courts
5 Pumping Station
6 Janitor's House
7 Oak Hall
8 Wingate Hall
9 Fernald Hall
10 Power House
11 Alumni Hall
12 Carpenter Shop
13 Coburn Hall
14 President's House
15 Observatory
16 Horticultural Building
17 Holmes Hall
18 Professors' House
19 Stable
20 Dairy Building
21 Barns
22 Farm Superintendent's House
23 Professor's House
24 Kappa Sigma House
25 Mt. Vernon House
26 Phi Gamma Delta House
27 B. O. &. O Waiting Rooms
28 Lord Hall
29 Sigma Nu House
30 Phi Kappa Sigma House
31 Sigma Alpha Epsilon House
32 Store House
33 Infirmary
34 Library
35 Farm Buildings
36 Heating Plant
37 Winslow Hall
38 Theta Chi House
39 Phi Eta Kappa House
40 Stock Judging Pavilion
41 DeltaTauDelta House
42 Hannibal Hamlin Hall
43 Professors' Houses
44 EstabrookeHall
45 BalentineHall
46 Baseball Grand Stand
47 Aubert Hall
STILLWATER RIVER

CATALOG OF THE

UNIVERSITY OF MAINE

1914-1915

ORONO, MAINE

Printed for the University
WATERVILLE
SENTINEL PUBLISHING COMPANY
1914

1914

JULY

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..
..	..	..	..	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

NOVEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

1915

JANUARY

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..
..	..	..	..	..	..	..

MAY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

1915

JULY

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

AUGUST

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..
..	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

NOVEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	.

1916

JANUARY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

FEBRUARY

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

APRIL

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	..	..	..	..	..	..

MAY

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..
..	..	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..

CALENDAR

FALL SEMESTER, 1914

September 11-15 inclusive,		Arrearage examinations
September 11-15 inclusive,		Entrance examinations
September 16,	Wednesday,	Registration begins, 8.00 A. M.
September 17,	Thursday,	Registration; First chapel, 10.30 A. M.
October 7,	Wednesday,	Fall term begins, College of Law
October 12,	Monday,	Columbus Day, a holiday
November 24,	Tuesday,	Meeting of the Board of Trustees
November 25,	Wednesday,	Thanksgiving recess begins, 12.00 M.
November 30,	Monday,	Thanksgiving recess ends, 1.30 P. M.
December 11,	Friday,	Sophomore prize declamations
December 22,	Tuesday,	Christmas recess begins, 12.00 M.

1915

January 4,	Monday,	Christmas recess ends, 1.30 P. M.
January 6,	Wednesday,	Winter term begins, College of Law
January 29,	Friday,	Fall semester ends, 5.05 P.M.

SPRING SEMESTER, 1915

January 30,	Saturday,	Registration
February 1,	Monday,	Spring semester begins, 8.00 A. M.
February 1,	Monday,	Copy of junior exhibition orations to be deposited with the Registrar
February 22,	Monday,	Washington's Birthday, a holiday,
March 17,	Wednesday,	Winter term ends, College of Law
March 24,	Wednesday,	Spring term begins, College of Law
March 27,	Saturday,	Spring recess begins, 12.00 M.
April 5,	Monday,	Spring recess ends, 1.30 P. M.
April 19,	Monday,	Patriots' Day, a holiday
April 30,	Friday,	Outline of theses to be passed to the major instructor

April	30,	Friday,	Harrington prize essays to be deposited with the Registrar
May	19,	Wednesday,	Theses of candidates for advanced degrees to be deposited
May	30,	Sunday,	Memorial Day
May	31,	Monday,	A holiday
May	31,	Monday,	Complete theses to be deposited by 12.00 M.
June	2-5,		Entrance examinations
June	6,	Sunday,	Baccalaureate address
June	7,	Monday,	Class Day Reception by the President
June	8,	Tuesday,	Meeting of the Board of Trustees Alumni luncheon; alumnæ luncheon Meeting of the Alumni Association
June	9,	Wednesday,	COMMENCEMENT, 9.30 A. M. Commencement dinner 12.00 M.

SUMMER TERM

June	28,	Monday,	Summer Term begins, 8.00 A. M.
August	6,	Friday	Summer Term ends

FALL SEMESTER, 1915

September	10-14,		Arrearage examinations
September	10-14,		Entrance examinations
September	15,	Wednesday,	Registration begins, 8.00 A. M.
September	16,	Thursday	Registration; First chapel, 10.30 A. M.
October	6,	Wednesday,	Fall term begins, College of Law
October	12,	Tuesday,	Columbus Day, a holiday
November	23,	Tuesday,	Meeting of the Board of Trustees
November	24,	Wednesday,	Thanksgiving recess begins, 12.00 M.
November	29,	Monday,	Thanksgiving recess ends, 1.30 P. M.
December	10,	Friday,	Sophomore prize declamations
December	22,	Wednesday,	Christmas recess begins, 12.00 M.
December	22,	Wednesday,	Fall term ends, College of Law

1916

January	3,	Monday	Christmas recess ends, 1.30 P. M.
January	5,	Wednesday,	Winter term begins, College of Law
January	28,	Friday,	Fall semester ends, 12.00 M.

SPRING SEMESTER, 1916

January	29,	Saturday,	Registration
January	31,	Monday,	Spring semester begins, 8 A. M.
March	15,	Wednesday,	Winter term ends, College of Law
March	22,	Wednesday,	Spring term begins, College of Law
June	7,	Wednesday,	COMMENCEMENT

*BOARD OF TRUSTEES

Hon. SAMUEL WADSWORTH GOULD, B. S., President Skowhegan
Term expires April 16, 1921

EDWIN JAMES HASKELL, B. S. Westbrook
Term expires December 31, 1916

JOHN MARSHALL OAK, B. S. Bangor
Term expires April 2, 1915

Hon. CHARLES LESTER JONES Corinna
Term expires April 17, 1917

FREELAND JONES, LL. B. Bangor
Term expires May 31, 1918

Hon. WILLIAM ROBINSON PATTANGALL, M. S. Waterville
Term expires April 13, 1919

WILLIAM ALBERT MARTIN Houlton
Term expires May 7, 1920

Hon. WILLIAM HENRY LOONEY Portland
Term expires September 10, 1921

EXECUTIVE COMMITTEE

Trustees GOULD, OAK, and F. JONES

FARM COMMITTEE

Trustees F. JONES, C. L. JONES, and MARTIN

* With the exception of Mr. Haskell, all the members of the Board are appointed by the Governor of the State, with the advice and consent of the Council, for terms of seven years. Mr. Haskell is appointed for a term of three years by the Governor, upon nomination by the Alumni Association, in accordance with the provisions of Chapter 196 of the Public Laws of 1883.

MAINE AGRICULTURAL EXPERIMENT STATION COUNCIL

ROBERT JUDSON ALEY, PH. D., LL. D. — *President*
CHARLES DAYTON WOODS, Sc. D. — *Secretary*
FREELAND JONES, LL. B., Bangor
CHARLES LESTER JONES, Corinna
WILLIAM ALBERT MARTIN, Houlton — *Committee of Trustees*
LEON STEPHEN MERRILL, M. D., Orono
Dean of the College of Agriculture
JOHN ALBERT ROBERTS, M. A., Norway
Commissioner of Agriculture
EUGENE HARVEY LIBBY, Auburn — *State Grange*
HOWARD LINCOLN KEYSER, Greene — *State Pomological Society*
RUTILLUS ALDEN, Winthrop — *State Dairymen's Association*
WILLIAM GEORGE HUNTON, Cherryfield
Maine Seed Improvement Association
LEONARD CLEMENT HOLSTON, Cornish
Maine Livestock Breeders' Association

JAMES MONROE BARTLETT, M. S.
EDITH MARION PATCH, PH. D.
WARNER JACKSON MORSE, PH. D.
RAYMOND PEARL, PH. D.
HERMAN HERBERT HANSON, M. S.
FRANK MACY SURFACE, PH. D.
— *Members of the Station Staff*

OFFICERS OF ADMINISTRATION

OF THE UNIVERSITY

ROBERT JUDSON ALEY, President
JAMES NORRIS HART, Dean
CHARLES JOHN DUNN, Treasurer
JAMES ADRIAN GANNETT, Registrar

OF THE COLLEGES AND EXPERIMENT STATION

LEON STEPHEN MERRILL, Dean of the College of Agriculture
JAMES STACY STEVENS, Dean of the College of Arts and Sciences
CHARLES DAYTON WOODS, Director of the Experiment Station
WILLIAM EMANUEL WALZ, Dean of the College of Law
MAROLD SHERBURNE BOARDMAN, Dean of the College of Technology

OF OTHER DEPARTMENTS

RALPH KNEELAND JONES, Librarian
EDGAR RAMEY WINGARD, Director of Athletics
FRANK SHELDON CLARK, In Charge of Military Instruction

*FACULTY OF INSTRUCTION AND INVESTIGATION

PROFESSORS

ROBERT JUDSON ALEY — Campus

PRESIDENT

A. B., Indiana University, 1888; A. M., 1890; Ph. D., Universiay of Pennsylvania, 1897; LL. D., Franklin College, 1909

MERRITT CALDWELL FERNALD — 54 Main Street

Emeritus Professor of Philosophy

A. B., Bowdoin College, 1861; A. M., 1864; Ph. D., 1881; LL. D., 1902, also University of Maine, 1908

JAMES MONROE BARTLETT — College Street

Chemist of the Experiment Station

B. S., University of Maine, 1880; M. S., 1883

LUCIUS HERBERT MERRILL — 100 Main Street

Professor of Biological and Agricultural Chemistry

B. S., University of Maine, 1885; Sc. D., 1908

JAMES NORRIS HART — College Street

Professor of Mathematics and Astronomy

DEAN OF THE UNIVERSITY

B. C. E., University of Maine, 1885; C. E., 1890; M. S., University of Chicago, 1897; Sc. D., University of Maine, 1908

FREMONT LINCOLN RUSSELL — 80 Main Street

Professor of Bacteriology and Veterinary Science

B. S., University of Maine, 1885; V. S., New York College of Veterinary Surgeons, 1886

JAMES STACY STEVENS — 99 Main Street

Professor of Physics

DEAN OF THE COLLEGE OF ARTS AND SCIENCES

B. S., University of Rochester, 1885; M. S., 1888; also Syracuse University, 1889; LL. D., University of Rochester, 1907

* Arranged in groups in order of seniority of appointment

CHARLES DAYTON WOODS 55 Main Street

DIRECTOR OF THE EXPERIMENT STATION

B. S., Wesleyan University, 1880; Sc. D., University of Maine, 1905

JOHN HOMER HUDDILSTON 105 Main Street

Professor of Greek and Classical Archaeology

A. B., Baldwin University, 1890; also Harvard University, 1893; Ph. D., University of Munich, 1887

WILLIAM EMANUEL WALZ 8 Fifth Street, Bangor

Professor of Law

DEAN OF THE COLLEGE OF LAW

A. B., Northwestern College, 1880; A. M., 1882; LL. B., Harvard University, 1889; Litt. D., Bowdoin College, 1911

RALPH KNEELAND JONES 26 Bennoch Street

Librarian

B. S., University of Maine, 1886

JACOB BERNARD SEGALL The Colonial, Bangor

Professor of Romance Languages

B. S. and B. L., University of Yassy, 1884; Ph. D., Columbia University, 1893

HAROLD SHERBURNE BOARDMAN 40 Main Street

Professor of Civil Enginering

DEAN OF THE COLLEGE OF TECHNOLOGY

B. C. E., University of Maine, 1895; C. E., 1898

GEORGE DAVIS CHASE 59 Main Street

Professor of Latin

A. B., Harvard University, 1889; A. M., 1895; Ph. D., 1897

CAROLINE COLVIN University Inn

Professor of History

A. B., Indiana University, 1893; Ph. D., University of Pennsylvania, 1901

* ARTHUR CRAWFORD JEWETT

Professor of Mechanical Engineering

S. B., Massachusetts Institute of Technology, 1901

WARNER JACKSON MORSE 33 North Main Street

Plant Pathologist in the Experiment Station

B. S., University of Vermont, 1898; M. S., 1903; Ph. D., University of Wisconsin, 1912

---

* Absent on leave without pay from September 1, 1914, to September 1, 1915

CHARLES PARTRIDGE WESTON — College Street

Professor of Mechanics and Drawing

B. C. E., University of Maine, 1896; C. E., 1899; A. M., Columbia University, 1902

RAYMOND PEARL — College Street

Biologist in the Experiment Station

A. B., Dartmouth College, 1899; Ph. D., University of Michigan, 1902

CHARLES BARTO BROWN — 83 Main Street

Professor of Railroad Engineering

Ph. B., Yale University, 1894; C. E., 1896

WALLACE CRAIG — College Street

Professor of Philosophy

B. S., University of Illinois, 1898; M. S., 1901; Ph. D., University of Chicago, 1908

ROLAND PALMER GRAY — College Street

Professor of English

A. B., Columbia University, 1893; A. M., 1907

RALPH HARPER McKEE — College Street

Professor of Chemistry

A. B., University of Wooster, 1895; A. M., 1897; Ph. D., University of Chicago, 1901

GARRETT WILLIAM THOMPSON — 53 Main Street

Professor of German

A. B., Amherst, 1888; A. M., 1891; Ph. D., University of Pennsylvania, 1907

GUY ANDREW THOMPSON — College Street

Professor of English Literature

A. B., University of Illinois, 1898; also Harvard University, 1900; A. M., 1901; Ph. D., University of Chicago, 1912

WINDSOR PRATT DAGGETT — College Street

Professor of Public Speaking

Ph. B., Brown University, 1902

MINTIN ASBURY CHRYSLER — College Street

Professor of Biology

A. B., Toronto University, 1894; Ph. D., University of Chicago, 1904

JOHN MANVERS BRISCOE — The Colonial, Bangor

Professor of Forestry

M. F., Yale University, 1909

LEON STEPHEN MERRILL — Campus

Director of Agricultural Extension Service

DEAN OF THE COLLEGE OF AGRICULTURE

M. D., Bowdoin College, 1889

EDGAR RAMEY WINGARD — University Inn

Professor of Physical Culture

DIRECTOR OF ATHLETICS

B. S., Susquehanna University, 1900; M. S., University of Pennsylvania, 1902.

ARTHUR JULIUS JONES — 78 North Main Street

Professor of Education

A. B., Grinnell College, 1893; Ph. D., Columbia University, 1907

GEORGE EDWARD SIMMONS — 2 Forest Avenue

Professor of Agronomy

B. S., Ohio Northern University, 1902; M. S., Ohio State University, 1905

GEORGE WARE STEPHENS — 76 North Main Street

Professor of Economics and Sociology

Ph. B., Iowa Wesleyan College, 1904; M. A., University of Wisconsin, 1907; Ph. D., 1911

WILLIAM EDWARD BARROWS, JR. — Myrtle Street

Professor of Electrical Engineering

B. S., University of Maine, 1902; E. E., 1908

EDGAR MYRICK SIMPSON — 31 Highland Avenue, Bangor

Professor of Law

A. B., Bowdoin College, 1894

EDITH MARION PATCH — College Street

Entomologist in the Experiment Station

B. S., University of Minnesota, 1901; M. S., University of Maine, 1910; Ph. D., Cornell University, 1911

FRANK MACY SURFACE — Bennoch Street

Biologist in the Experiment Station

A. B., Ohio State University, 1904; A. M., 1905; Ph. D., University of Pennsylvania, 1907

BLISS S BROWN — 98 Main Street

Professor of Horticulture

B. S., Michigan Agricultural College, 1903; M. S., University of California, 1911

LAMERT SEYMOUR CORBETT — Campus

Professor of Animal Industry

B. Sc., Massachusetts Agricultural College, 1909; M. S., State University of Kentucky, 1913

FRANK SHELDON CLARK, Second Lieutenant, United States Coast Artillery, 1909; First Lieutenant, 1911 — 97 Main Street

Professor of Military Science and Tactics

B. S., Norwich University, 1908

HERMAN HERBERT HANSON — 61 Forest Avenue

Associate Chemist in the Experiment Station

B. S., Pennsylvania State College, 1903; M. S., University of Maine, 1926

CHARLES WILSON EASLEY — 7 Main Street

Associate Professor of Chemistry

A. B., Dickinson College, 1887; A. M., 1890; Ph. D., Clark University, 1908

EDSON FORBES HITCHINGS — 2 Summer Street

Associate Professor of Horticulture

C. E., University of Maine, 1875; M. S., 1889

ANDREW PAUL RAGGIO — 102 Main Street

Associate Professor of Romance Languages

B. A., University of Texas, 1896; A. M., Harvard University, 1902; Ph. D., 1904

LEON ELMER WOODMAN — 28 Bennoch Street

Associate Professor of Physics

A. B., Dartmouth College, 1899; A. M., 1902; Ph. D., Columbia University, 1910

PAUL LEONARD BEAN — Forest Avenue

Associate Professor of Civil Engineering

B. S., University of Maine, 1904; C. E., 1910

JAMES ADRIAN GANNETT — 97 Main Street

Registrar

B. S., University of Maine, 1908

ALBERT THEODORE CHILDS — 55 Main Street

Associate Professor of Electrical Engineering

B. S., Worcester Polytechnic Institute, 1906; E. E., 1908

GEORGE HENRY WORSTER 234 Center Street, Bangor
Associate Professor of Law
LL. B., University of Maine, 1905; LL. M., 1906

HARLEY RICHARD WILLARD 32 Main Street
Associate Professor of Mathematics
A. B., Dartmouth College, 1899; A. M., Yale University, 1910; Ph. D., 1912

ARCHER LEWIS GROVER 3 Myrtle Street
Associate Professor of Drawing
B. M. E., University of Maine, 1889; B. S., 1902

ALICE MIDDLETON BORING 13 Mill Street
Associate Professor of Zoölogy
A. B., Bryn Mawr College, 1904; A. M., 1905; Ph. D., 1910

WILLIAM AMBROSE JARRETT 16 Bennoch Street
Associate Professor of Pharmacy
Pharm. D., Massachusetts College of Pharmacy, 1912

JULIUS ERNEST KAULFUSS Main Street
Associate Professor of Civil Engineering
B. S., University of Wisconsin, 1908

FRANCES ROWLAND FREEMAN 13 Mill Street
Associate Professor of Home Economics
B. Sc., Ohio State University, 1910; M. Sc., 1911

JAMES McCLUER MATTHEWS 35 North Main Street
Associate Professor of Economics and Sociology
A. B., Park College, 1903; A.M., Harvard University, 1914

JOHN CALVIN MELLETT University Inn
Associate Professor of English
A. B., Indiana University, 1912

DANIEL WILSON PEARCE 11 Mill Street
Associate Professor of Education
A. B., Indiana University, 1910; A.M., 1912

TRUMAN LEIGH HAMLIN Stillwater
Assistant Professor of Mathematics
A. B., Western Reserve University, 1899; M. A., University of Missouri, 1902

BARTLETT BROOKS 19 North Park, Bangor
Assistant Professor of Law
A. B., Harvard University, 1889; LL. B., 1902

HARRY NEWTON CONSER, A. M. Oak Street

Assistant Professor of Botany

B. S., Central Pennsylvania College, 1883; M. S., 1886; A. M., Harvard University, 1908

LLOYD MEEKS BURGHART Forest Avenue

Assistant Professor of Chemistry

A. B., Lake Forest College, 1906; M. A., University of Maine, 1911

RALPH WOODBURY REDMAN 10 Myrtle Street

Assistant Director of Agricultural Extension Service

B. S., University of Maine, 1912

ROBERT RUTHERFORD DRUMMOND 80 North Main Street

Assistant Professor of German

B. S., University of Maine, 1905; Ph. D., University of Pennsylvania, 1909

CARL HENRY LEKBERG Forest Avenue

Assistant Professor of Mechanical Engineering

B. S., University of Maine, 1907

LAWRENCE BOYLSTON CHAPMAN Forest Avenue

Assistant Professor of Mechanical Engineering

S. B., Massachusetts Institute of Technology, 1910

HAROLD SCOTT OSLER 106 Hannibal Hamlin Hall

Assistant Professor of Agronomy

B. S., Michigan Agricultural College, 1913

RAYMOND HARMAN ASHLEY Forest Avenue

Assistant Professor of Chemistry

B. Sc., Rutgers College, 1903; M. A., Yale, 1905; Ph. D., 1906

ALBERT GUY DURGIN Middle Street

Assistant Professor of Chemistry

B. S., University of Maine, 1908; M. S., 1909

ALPHEUS CROSBY LYON 1 Pond Street

Assistant Professor of Civil Engineering

B. S., University of Maine, 1902; C. E., 1913; B. S., Massachusetts Institute of Technology, 1904

VICTOR GEORGE AUBRY 208 Hannibal Hamlin Hall

Assistant Professor of Animal Industry

B. S., Connecticut Agricultural College, 1912

INSTRUCTORS

EVERETT WILLARD DAVEE — College Street
Instructor in Wood and Iron Work

CHARLES JENKINS CARTER — Forest Avenue
Instructor in Machine Tool Work

*LOWELL JACOB REED
Instructor in Mathematics
B. S., University of Maine, 1907; M. S., University of Pennsylvania, 1912

MAYNIE ROSE CURTIS — 13 Mill Street
Assistant Biologist in the Experiment Station
A. B., University of Michigan, 1905; A. M., 1908; Ph. D., 1913

WALTER ELWOOD FARNHAM — Forest Avenue
Instructor in Drawing

WALTER EDMUND WILBUR — 5 Pine Street
Instructor in Mathematics
B. S., University of Maine, 1908; M. S., 1911

ERNEST CONANT CHESWELL — 25 Mill Street
Instructor in Electrical Engineering

ROYDEN LINDSAY HAMMOND — 59 Main Street
Seed Analyst and Photographer in the Experiment Station

EARLE OVANDO WHITTIER — 458 Hammond Street, Bangor
Instructor in Chemistry
B. S., University of Maine, 1911; M. S., 1913

HARRY WOODBURY SMITH — 1 Forest Avenue
Instructor in Bacteriology
B. S., University of Maine, 1909

EDWARD EUGENE SAWYER — Old Town
Assistant Chemist in the Experiment Station
B. S., University of Maine, 1912

ELMER ROBERT TOBIE — 5 Pond Street
Assistant Chemist in the Experiment Station
B. S., University of Maine, 1911

HENRY ROBBINS BARROWS — 106 Hannibal Hamlin Hall
Instructor in Biology
Ph. B., Hamiton College, 1906; M. S., 1912

*Absent on leave without pay from September 1, 1914, to September 1, 1915

JOHN HARRY PARRY 53 Main Street
Instructor in English
A. B., Hamilton College, 1910; A. M., 1914

LEROY FRANKLIN BLISS College Street
Instructor in English
A. B., Brown University, 1905

MICHAEL SHAPOVALOV 82 North Main Street
Assistant Pathologist in the Experiment Station
B. A., University of Dorpat, 1903; M. S., University of Maine, 1913

HERBERT SOLEY BAIN 53 Main Street
Instructor in German
A. B., Wesleyan University, 1912

DOROTHEA BEACH Mill Street
Instructor in Home Economics

ERIC NICHOLS BOLAND 208 Hannibal Hamlin Hall
Instructor in Animal Industry
B. Sc., Massachusetts Agricultural College, 1912; M. S., Iowa State College, 1913

DAVID LEE CLARK North Main Street
Instructor in English
B. A., East Texas College, 1907; A. M., University of North Carolina, 1909

CARLETON WHIDDEN EATON 14 Bennoch Street
Instructor in Forestry
A. B., Bowdoin College, 1910; M. F., Yale University, 1912

RALPH MAYNARD HOLMES 112 Main Street
Instructor in Physics
B. A., University of Maine, 1911; M. A., Wesleyan University, 1913

ORVILLE ALVIN JAMISON 59 Main Street
Instructor in Animal Industry
B. Sc., Ohio State University, 1912

EARL JONES 106 Hannibal Hamlin Hall
Instructor in Agronomy
B. Sc., Ohio State University, 1912; M. Sc., 1913

MARTIN ANDREW NORDGAARD 205 Hannibal Hamlin Hall
Instructor in Mathematics
A. B., St. Olaf's College, 1903; A. M., University of Maine, 1914

LILLIAN NANCY RANDALL 13 Mill Street
Instructor in Home Economics

JOSEPH SPEAR — University Inn

Instructor in Mathematics

A. B., Harvard University, 1913

JOSEPH NEWELL STEPHENSON — Gilbert Street

Instructor in Chemistry

S. B., Massachusetts Institute of Technology, 1909; M. S., Rose Polytechnic Institute, 1911

VINCENT MILO TRANSUE — 28 Bennoch Street

Instructor in Physics

B. S., Pennsylvania State College, 1912; M. S., 1913

ELWOOD WHITNEY JENNISON — 233 Cedar Street, Bangor

Instructor in Mechanical Engineering

B. S., University of Maine, 1913

JOHN RICE MINER — 38 Pine Street

Computer in the Experiment Station

B. A., University of Michigan, 1910

MARION WILHELMINA BORDEN — 1 Mill Street

Instructor in Home Economics

B. S., University of Maine, 1913

JACOB ZINN — 14 Bennoch Street

Assistant Biologist in the Experiment Station

Agr. D., Hochschule für Bodenkultus, 1914

CHESTER EARL ANDREWS — College Street

Instructor in Chemistry

B. S., Syracuse University, 1913; M. S., 1914

TIMOTHY JEREMIAH CONNORS, Jr. — Forest Street

Instructor in Pharmacy

Pharm. D., Massachusetts College of Pharmacy, 1912

JAMES JOHN DONEGAN — College Street

Instructor in Civil Engineering

Ph. B., Yale University, 1909

BERT EMSLEY — University Inn

Instructor in English

A. B., Harvard University, 1911

RAYMOND FLOYD — 108 Hannibal Hamlin Hall

Instructor in German

B. A., University of Maine, 1913

NORMAN RICHARDS FRENCH — 112 Main Street

Instructor in Physics

B. A., University of Maine, 1914

JOHN WHITTEMORE GOWEN — Hannibal Hamlin Hall
Assistant Biologist in Experiment Station
B. S., University of Maine, 1914

WILLIAM GORDON JAMES — 75 North Main Street
Instructor in Electrical Engineering
B. S., Kansas State Agricultural College, 1913

EARL EVERETT KEYES — University Inn
Instructor in English
A. B., Indiana University, 1912

FRANÇOIS JOSEPH KUENY — University Inn
Instructor in Romance Languages
B. ès L., University of Paris, 1897; L. ès L., Besançon, 1901

ARTHUR WHITING LEIGHTON — University Inn
Instructor in Drawing

ARTHUR BRUTON LEONARD — University Inn
Instructor in Mechanical Engineering
M. E., Lehigh University, 1914

ALEXANDER LURIE — 25 Mill Street
Instructor in Horticulture
B. S., Cornell University, 1914

SIDNEY WINFIELD PATTERSON — Hannibal Hamlin Hall
Instructor in Biological and Agricultural Chemistry

GLEN BLAINE RAMSEY — 206 Hannibal Hamlin Hall
Instructor in Biology
A. B., Indiana University, 1913; A. M., 1914

NEIL CARPENTER SHERWOOD — Campus
Instructor in Animal Industry
B. S., University of Maine, 1914

HAROLD JOSEPH SHAW — Bath
Director of Farm Demonstrations, Sagadahoc County

CLARENCE WALLACE BARBER — Portland
Director of Farm Demonstration Work, Cumberland Connty
B. S., University of Maine, 1912

CLARENCE ALBERT DAY — Machias
Director of Farm Demonstrations, Washington County

ARTHUR LOWELL DEERING — Augusta
Director of Farm Demonstrations, Kennebec County
B. S., University of Maine, 1912

MORRIS DANIEL JONES — Forest Avenue
Director of Farm Demonstrations, Penobscot County
B. S., University of Maine, 1912

GEORGE ALBERT YEATON — Norway
Director of Farm Demonstrations, Oxford County
WILSON MONTGOMERY MORSE — Farmington
Director of Farm Demonstrations, Franklin County
B. S., University of Maine, 1914
HAROLD HARLAN NASH — Sanford
Director of Farm Demonstrations, York County
GEORGE NEWTON WORDEN — Ellsworth
Director of Farm Demonstrations, Hancock County
B. S., University of Maine, 1913
RALPH PIKE MICHELL — 5 Pond Street
In Charge of Boys Agricultural Club Work
MARIE WILHEMINA GURDY — University Inn
In Charge of Girls Agricultural Club Work
B. S., Simmons College, 1913
WILLIAM COLLINS MONAHAN — University Inn
In Charge of Poultry Extension Work
B. S., University of Maine, 1914
MAY ELLA TAFT — 14 Bennoch Street
Cataloger in the Library
B. A., Wellesley College, 1908; B. S., Simmons, 1912
GENEVA ALICE REED — College Street
Assistant in the Library
B. A., University of Maine, 1910
ANTOINETTE TREAT WEBB — 1 Mill Street
Assistant in English
B. A., University of Maine, 1913
ANNE ELIZABETH HARWOOD — 14 Bennoch Street
Assistant in the Library
B. S., Simmons College, 1913
ESTELLE INEZ BEAUPRE — 1 Mill Street
Assistant in Romance Languages
B. A., University of Maine, 1914
MARGARET JUNE KELLEY — 1 Mill Street
Assistant in German
B. A., University of Maine, 1912
WOODBURY FREEMAN PRIDE — 206 Hannibal Hamlin Hall
Assistant in Biology
B. S., University of Maine, 1914

ROSCOE WOODS College Street
Assistant in Mathematics
A. B., Georgetown College, 1914

ARTHUR NELSON SMITH University Inn
Assistant in Physical Training

PAUL WHEELER MONOHON 108 Hannibal Hamlin Hall
Assistant in Extension Work and Physical Training
B. S., University of Maine, 1914

LECTURERS

LUCILIUS ALONZO EMERY Ellsworth
Lecturer on Roman and Probate Law
A. B., Bowdoin College, 1861; A. M., 1864; LL. D., 1898

LOUIS CARVER SOUTHARD Boston
Lecturer on Medico-Legal Relations
B. S., University of Maine, 1875; M. S., 1892; LL. D., 1904

EDWARD HARWARD BLAKE 107 Court Street, Bangor
Lecturer on Admiralty
LL. B., Albany Law School, 1878; LL. D., University of Maine, 1910

ISAAC WATSON DYER Portland
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations
A. B., Bowdoin College, 1878

JOHN ROGERS MASON 384 Hammond Street, Bangor
Lecturer in Bankruptcy Law
A. B., Harvard College, 1869; A. M., LL. B., 1872

WILLIAM BRIDGHAM PEIRCE 25 Parkview Avenue, Bangor
Resident Lecturer on Maine Practice
B. Me., University of Maine, 1890

HENRY BURT MONTAGUE Southbridge Mass.
Lecturer on Practice and History of Law
LL. B., Cornell University, 1895; LL. D., University of Maine, 1910

LAWRENCE VIVIAN JONES 267 Pine Street, Bangor
Lecturer on Forestry Law
LL. B., University of Maine, 1910

COMMITTEES OF THE FACULTY

ADMISSION: Hart, the Deans

ADVANCED DEGREES: Chase, Colvin, Craig, McKee, Pearl, Segall, Walz, Willard, Woodman

ATHLETICS: Wingard, F. S. Clark, Corbett, Gannett, Grover, A. J. Jones, Kaulfuss, Worster

ATTENDANCE: C. B. Brown, Conser Lekberg, Simpson, Stephens, Wilbur

AUDITING: L. H. Merrill, Brooks, Burghart, Conser, G. A. Thompson

CHAPEL: Barrows, Matthews, L. S. Merrill, G. A. Thompson, G. W. Thompson, Woodman

COMMENCEMENT: Woods, B. S Brown, Childs, R. K. Jones, L. H. Merrill

EMPLOYMENT: Gannett, Corbett, Durgin, Simmons

FITTING SCHOOLS: A. J. Jones, Chase, Easley, Gray, Hart, L. S. Merrill, Pearce, Weston

HEALTH: Wingard, Ashley, Boring, Freeman, Morse, Russell

HONORS: Chrysler, Bean, Briscoe, B. S Brown, Easley, Lekberg, Willard

LIBRARY: R. K. Jones, Barrows, A. J. Jones, Redman, Willard

ORGANIZATIONS AND EXHIBITIONS: McKee, chairman

Sub-committees: Dramatics,—Daggett, C. B. Brown, Raggio
Musical—G. W. Thompson, A. J. Jones, Chrysler
Speaking and Debating,—Gray, Daggett, Stephens
Miscellaneous,—McKee, Bean, Drummond

PUBLICATIONS: Stevens, R. K. Jones

RULES: Stephens, C. B. Brown, Chapman, Conser, Drummond, Simmons

SCHEDULE: Weston, Gannett, Hamlin, the Deans

SOCIAL AFFAIRS: Huddilston, Briscoe, Colvin, Farnham, Freeman, Wingard

STUDENT AFFAIRS: Hart, the Deans, F. S. Clark, Wingard

GENERAL INFORMATION

HISTORY

The University of Maine is a part of the public educational system of the State. Its establishment followed the passage of an act of Congress, approved by President Lincoln, July 2, 1862, which provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which should be established a perpetual fund, "the interest of which shall be inviolably appropriated by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings, and required each state accepting the benefit of the provisions of the act "to provide within five years not less than one college" to carry out its purposes.

The State of Maine accepted the land grant and gave full assent to all the provisions and conditions of the act in a resolve of the Legislature of 1863, approved March 23. The Legislature of 1865, in an act approved February 25, created a corporation to act for the State in the administration of the affairs of the College, and defined its powers and duties. The original name of the institution was the State College of Agriculture and the Mechanic Arts, but this was changed to the University of Maine by the Legislature of 1897.

The first Board of Trustees was composed of sixteen members, each county delegation in the Legislature selecting a member of the Board. The principle of county representation was abandoned in 1867, when the size of the Board was reduced.

The first class, consisting of twelve members, was admitted September 21, 1868. The faculty numbered two. By 1871-72, when the first class had become seniors, four curricula had been arranged,—Agriculture, Civil Engineering, Mechanical Engineering, and Elective.

The legislative act which created the Board of Trustees directed that its members should, "as soon as may be, arrange and make known the several courses of instruction which they will undertake at the outset of the College, and shall enlarge and improve the same whenever practicable." The development of the University has been in compliance with these directions. The College of Agriculture is the outgrowth of the original curriculum in Agriculture, the College of Technology of the curricula in Civil and Mechanical Engineering, and the College of Arts and Sciences of the Elective curriculum.

The original single curriculum of the College of Agriculture continued with but minor changes for many years. Horticulture was added in 1902, and Forestry in 1903. The School Course in Agriculture was established in 1903. The curriculum in Agriculture was divided into Agronomy and Animal Industry in 1904, and the latter was sub-divided into Animal Husbandry and Poultry Husbandry in 1909. The Extension Department was organized in 1907. Although work in Home Economics was begun some years earlier, the Home Economics curriculum was not offered until 1909.

The College of Arts and Sciences has developed gradually, as needs have been recognized, and as means have permitted, from the original Elective curriculum into an organization which not only provides required and elective courses for students in the other colleges of the University but has also a well developed entity of its town. There are now thirteen departments in which students may select their major subject,—Biology, Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics, and Romance Languages.

The College of Technology has maintained from the beginning curricula in Civil and Mechanical Engineering. To these have been added Chemistry in 1874, Electrical Enginering in 1894, Pharmacy in 1895, and Chemical Engineering in 1905.

The College of Law was opened in 1898. It occupied quarters in the Exchange Building, at the corner of State and Exchange Streets, Bangor, until the Bangor fire of 1911. It is now located in Stewart Hall, at the corner of Union and Second Streets, Bangor.

The Maine Agricultural Experiment Station was established as a department by act of the Legislature of 1887, as a result of the passage by Congress of the Hatch Act, succeeding the Maine Fertilizer Control and Agricultural Experiment Station which had been established in 1885.

Graduate instruction has been given by various departments for many years. The first Master's degree was conferred in 1881. There is no provision for graduate work in advance of that required for the Master's degrees.

Summer schools were held in coöperation with the State Department of Education in 1895, 1896, and 1897. These were of three weeks each and they attracted chiefly teachers in elementary schools. Beginning with 1902, a Summer Term has been held annually, first of five weeks but now of six. It is designed for teachers in secondary schools and for college students who desire to take advantage of its opportunities, and it also gives some courses for those who seek an opportunity to make up entrance credits. In 1914, the departments offering courses were Chemistry, Economics and Sociology, Education, English, German, History, Home Economics, Latin, Mathematics and Astronomy, Physics, and Romance Languages.

The University is coëducational, women having been admitted since 1872, in compliance with special legislative enactment.

ENDOWMENT, INCOME, AND EQUIPMENT

The State of Maine received by the act of Congress above referred to 210,000 acres of public land from which an endowment fund of $118,300 was realized. This fund yields 5% annually.

Former Governor Abner Coburn, of Skowhegan, for many years President of the Board of Trustees, made a bequest of $100,000 to the institution. This fund yields 4% annually.

In the year of 1912, Hon. D. D. Stewart of St. Albans, as executor of the will of Levi M. Stewart, late of Minneapolis, gave the sum of $20,000 for the benefit of the College of Law. In 1914 Mr. Stewart individually donated $13,750 for the benefit of the same college.

Under acts of Congress, approved August 30, 1890, and March 4, 1907

Under acts of Congress approved August 30, 1890, and March 4, 1907, the University receives $50,000 annually from the United States.

Under an act of the Legislature, approved April 2, 1913, the University receives $110,000 for each of the years 1913, 1914, 1915, and 1916, for maintenance.

Under an act of the Legislature approved April 2, 1913, the University receives $95,000 for buildings for the years 1913 and 1914.

Under acts of Congress approved March 2, 1887 and March 17, 1906, the University receive $30,000 annually for the maintenance of the Agricultural Experiment Station.

For Extension Work in the College of Agriculture, $10,000 a year are available from the Federal Government, and $19,500 from the General Education Board.

Students fees and miscellaneous receipts complete the income.

The university campus of 370 acres has a beautiful location in the town of Orono, Penobscot County, nine miles from the city of Bangor. It contains many evergreen and deciduous trees, flowering shrubs, and plants, and a portion is in woodland. The Stillwater River, a branch of the Penobscot, forms its western boundary.

Orono is on the Maine Central railroad, and the cars of the Bangor Railway and Electric Company run through the university grounds, giving half-hour service to Bangor and Old Town. It is exactly half way between Kittery, the first town on the Boston and Maine railroad as it enters the State, and Fort Kent, on the New Burnswick border, the northern terminus of the Bangor and Aroostook railroad.

The town is one of the most attractive in Maine. It was settled in 1774, incorporated in 1806, and now has a population of over 3,500. The public schools rank well, and a considerable number of families are attracted by the educational advantages. There are four churches, at all of which students receive a cordial welcome. The climate is healthful and invigorating.

The College of Law is located at the corner of Union and Second Streets, Bangor, in what had been previously one of the most attractive private estates in the city.

BUILDINGS AND THEIR EQUIPMENT

Hannibal Hamlin Hall.—This is a men's dormitory, completed in 1911. It was named for the Honorable Hannibal Hamlin, of Hampden and Bangor. Mr. Hamlin held many offices of honor and responsibility, including that of Vice President of the United States, 1861-65. Mr. Hamlin represented Penobscot County in the original Board of Trustees, and was its first President, serving 1865-66. Constructed of brick with stone trimmings, this building is 35 feet wide and 168 feet long, and has four stories founded on a high, well lighted concrete basement, in which are located a dining room, recreation room, waiters' room, with lavatory toilet, and locker room, and room for training table. In a one-story ell adjoining the basement is the kitchen, containing the usual equipment. From the basement up, the building is separated into three sections by two 12-foot brick fire walls, which extend up through the roof. Each section has its own entrance, vestibule hall, and corridor. The first story of the central section has a reception hall and living room, with bath, lavatory, and shower bath on one side of the corridor, and on the other side the Young Men's Christian Association rooms with toilet and lavatory. The central section in the second, third, and fourth stories is divided in each story into four chambers, with shower bath and lavatories. The two end sections in each of the four stories are divided into four suites of two bedrooms and a study room, with a toilet, lavatories, and shower bath for the use of the four suites. The building is heated by steam and lighted by electricity. There are 96 rooms in the two end sections and 17 in the central section, making a total of 113 rooms above the basement. Each bedroom has an ample clothes closet.

Oak Hall.—This is a men's dormitory 42 by 83 feet, erected in 1871. It is named for Honorable Lyndon Oak, of Garland, member of the Board of Trustees, 1867-89, its Clerk, 1871-83, and President, 1883-89. It is a substantial brick building of four stories and has forty-nine rooms for students. It contains bath rooms, is heated by steam and lighted by electricity, and is connected with Hannibal Hamlin Hall by a covered passage way.

Balentine Hall.—The Legislature of 1913 made an appropriation for the erection of one wing of a women's dormitory. This was completed September 1, 1914. The wing is 31 by 57 feet. This building has been named Balentine Hall in honor of Elizabeth Abbott Balentine, Secretary and Registrar of the University, from 1895 to 1913. It contains accommodations for 52 women.

Mount Vernon House.—This is a wooden building, completed in 1898, which provides dormitory accommodations for women. It is situated near the recitation and laboratory buildings upon a site overlooking the campus, and commands a beautiful view of the river, villages, and hills. It is three stories in height, built in the colonial style, and consists of a long central portion and two wings. It contains a parlor, dining-room, kitchen, bath-room, and eighteen rooms intended for two students each. The rooms are large, well lighted, heated by steam, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet, and wide enough to serve as an assembly or study room. Both houses for women are under the supervision of superintendents.

University Inn.—This is a wooden building located in the village of Orono, which the university has leased for a term of years. It is occupied chiefly by instructors and has accommodations for fifty persons.

Alumni Hall.—This is a brick building, erected in 1900. It is 41 by 117 feet, with an ell 64 by 107 feet. It was given its name because funds required for its erection were subscribed by alumni of the University. The front part contains on the ground floor the offices of the President, the Dean of the University, the Registrar, and the Treasurer; the Trustees' room, the university post office, and two recitation rooms for the use of the department of Mathematics. The second floor contains the university chapel with a large pipe organ in the choir gallery, and the gymnasium and drill hall. A description of the equipment is given under the paragraph on physical training. Under the gymnasium are offices of the Professors of Physical Culture and Military Science and Tactics, the baseball cage, lockers, lavatories, and store rooms.

Aubert Hall.—This building is used by the departments of Chemistry and Physics. It is named in memory of the late Alfred Bellany Aubert, Professor of Chemistry from 1874 to 1910. It was erected in 1914 by funds appropriated by the State Legislature. It is a four story brick building, 150 by 58 feet in addition to an ell. In the part devoted to chemistry are rooms devoted to fuel and gas analysis, paper making, and pulp making, and several laboratories for various purposes. There is a lecture room which will seat 290 persons and several smaller class rooms. For the department of Physics there are laboratories for electrical measurements, mechanics and heat, optics, photometry, and several special laboratories. A special room for meteorology has been provided and there are a number of recitation rooms for each department.

Coburn Hall.—This building was erected in 1888 for the departments of Natural History and Agriculture. It was named for ex-Governor Abner Coburn of Skowhegan, Governor of Maine, 1863-64, President of the Board of Trustees, 1867-79, and chief individual benefactor of the University. It is 47 by 64 feet, with an ell 36 by 41 feet. It is now occupied chiefly by the department of Biology and the museum. It is a brick building three stories in height. In the basement are a laboratory for animal and plant physiology, and the University Store. Connected with the basement is a small greenhouse for the use of the department of Biology. On the first floor are a research zoölogical laboratory, a class room for the department of History, a general laboratory, and part of the museum. On the second floor are the botanical and zoölogical laboratories and offices, a lecture room, and part of the museum. On the third floor are two rooms, one containing the remainder of the museum, the other forming a large lecture room.

Estabrooke Hall.—This building is named for Professor Horace M. Estabrooke, head of the department of English from 1891 until his death in 1908. It is a wooden building, formerly the Commons, remodeled in 1911 for the use of the department of English. It is 33 by 50 feet with an ell 23 by 40 feet. It contains four recitation rooms, two rooms for consultation purposes, and four offices for members of the department.

Fernald Hall.—This is the oldest building on the campus, erected 1868-70 for the department of Chemistry. It was named for Merritt C. Fernald, LL. D., the first member of the faculty appointed, who retired in 1908. He was Acting President, 1868-71, and President, 1879-93. It is 40 by 50 feet with an ell 38 by 52 feet. It is a two-story brick building, containing eighteen rooms. Upon the removal of the department of Chemistry to Aubert Hall, this building will be used chiefly for recitation rooms and offices for the departments of German and Romance Languages.

Holmes Hall.—This is a two-story brick building with high, well lighted basement, erected for the Maine Agricultural Experiment Station. The central portion was built in 1888. A part of the south wing was added in 1890, the north wing was added in 1904, the south wing was completed, and the vestibule entrance added in 1913. It is named for Dr. Ezekiel Holmes, of Winthrop, pioneer in scientific agricultural investigations, founder and first secretary of the State Board of Agriculture, founder of the Maine Farmer and its editor until his death in 1865, and most active in securing the establishment of the State College of Agriculture and Mechanic Arts as an independent institution.

On the ground floor are five large chemical laboratories used in the analysis of foods, feeding stuffs, fertiliers, and drugs; the laboratories of the entomologist, and the laboratory and office of the plant pathologist. The general office and mailing room, the Director's office, laboratories for seed testing and photography and the laboratories of the biologist are on the second floor. There are in a high well lighted basement, rooms for the gas machine, for the grinding and preparation of samples, laboratory for the calorimeter, culture and preparation rooms for the plant pathologists, a nitrogen laboratory, and rooms for the storage of chemicals and glassware.

The building is thoroughly equipped with apparatus for the work of agricultural investigation. An attached greenhouse is used by the entomologists and plant pathologists.

Library Building.—The Library Building is of stone, two stories above a basement which is almost entirely above the ground level, and is surmounted by a dome. It was completed in 1906. For its erection and furnishing, Mr. Andrew Carnegie gave $55,000, and the Hallowell Granite Works furnished the granite at a price that was equivalent to a gift of several thousand dollars.

The first floor contains an entrance hall, open to the dome, reference and periodical rooms, the Librarian's office, a room for reserved books, and a women's room. The second floor contains a general lecture room with seating capacity of 150, and five seminar rooms. On the walls of the gallery, the lecture room, and the delivery room is the art collection of the University. The basement contains a newspaper room, store room, janitor's room, men's room, and a room designed primarily as a meeting place for various student organizations.

The stacks are in the rear of the main building, and are freely accessible. They contain shelf room for 60,000 volumes, and a cataloger's room.

Lord Hall.—This is a brick building, completed in 1905, erected for the departments of Electrical and Mechanical Engineering. It is named for the Honorable Henry Lord of Bangor, member of the Board of Trustees, 1891-1908, and its President, 1892-1908. It consists of a main part, 82x56 feet, two stories in height, and an ell, 125-42 feet, partly of two stories and partly of one story. It contains six recitation rooms, a large drawing room, shops, laboratories, and offices. The mechanical laboratory contains the usual apparatus necessary for the study of strength of materials, steam and gas apparatus, principles of hydraulics, etc.

For tests of materials there are two Riehlé power-operated testing machines, one of 60,000 lbs. capacity for tensile, compressive, and transverse tests, and a 20,000 pound transverse machine. These are equipped with the necessary measuring appliances. There are also gas and steam engines and apparatus necessary for the study of engine performance. The shops comprise the machine shop, forge shop, foundry, carpentry, and pattern shop. The forges are of the Sturtevant down draft type. The equipment in the electrical laboratory has been developed to parallel practical conditions as far as possible, and consists essentially of a 20 kilowatt electrical sub-station, converting from a three phase, 60 cycle, 115 volts, alternating curent system to direct current by means of rotary converters and belted alternating current motors driving direct generators. In addition to volt-meters, ammeters, and watt-meters for both direct and alternating currents, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressures for experimental work and voltages for operating two and three phase rotary converters, a self starting rotary converter, a three phase generator, a three phase revolving field synchronous motor, a three phase variable speed induction motor, a single phase synchronous motor, a single phase self-starting induction motor, direct current generator and mortors, and laboratory telephone equipment.

Stewart Hall.—This building is situated in Bangor, corner of Union and Second Streets. It is in one of the finest parts of the city, on the car line, in a quiet neighborhood, and within a few minutes' walk from the Penobscot County Court House, the Young Men's Christian Association,, the business section of the city, and the Maine Central railroad station. The grounds about the building occupy nearly a whole square. They are surrounded by elms and afford ample space for tennis courts. The building itself is a brick structure, three stories high. There are twelve large, commodious, and well lighted rooms in the main part. Those on the first floor are used as recitation rooms; on the second floor for library and office purposes; and on the top floor for the practice court, the Maine Law Review, and recreation purposes.

Wingate Hall.—This is a brick building erected in 1891-92 for the engineering departments. It stands on the side of the White Hall, the first building erected for college uses, burned in 1890. It is named for Honorable William P. Wingate of Bangor, who first suggested and was most active in securing the location of the institution in Orono. He was a member of the Board of Trustees, 1867-84, and its President, 1879-83.

It is 62 by 82 feet. It is now occupied by the departments of Civil Engineering, Latin, Mechanics and Drawing, and Philosophy. In the basement are cement, concrete, and road materials testing laboratories. On the ground floor are three recitation rooms, instrument rooms, and the offices of the Dean of the College of Technology and the professors of Civil Engineering, Latin, and Mechanics and Drawing. On the second floor are two recitation rooms; the office of the Professor of Philosophy: a drawing room, filing room, and offices used by the department of Civil Engineering. On the third floor are two drawing rooms for the use of the department of Mechanics and Drawing and Civil Engineering; a filing room, and office room for use of the former department.

Winslow Hall.—This building was erected in 1908 for the various departments of the College of Agriculture. It is named in honor of the Honorable Edward B. Winslow of Portland, member of the Board of Trustees, 1898-1911, and its President, 1908-11. The ground plan measures 63 by 100 feet and the building contains over forty rooms. It is built of brick, concrete, and slate, of the Tudor style of architecture, and has four floors, including a well lighted basement for lecture rooms and laboratories. The building contains the offices, recitation rooms, and laboratories of the departments of Agronomy, Animal Industry, Bacteriology and Veterinary Science, Biological and Agricultural Chemistry, Farm Management, Forestry, and Horticulture, a sewing room and laundry for the department of Home Economics, and the office and filing room of the Extension department.

In the rear of this building is located the stock judging pavilion, which is an octagonal structure 50 feet in diameter, having a seating capacity of 600.

Dairy Building.—The dairy building, 50 x 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese-curing room, and a testing laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese.

Farm Buildings.—The lower barn, 100 x 50 feet, contains a cow stable with 26 stalls, two grain rooms, three bull rooms, and silo; and has storage capacity for 150 tons of hay and 100 tons of silage. The upper barn, 100 x 40 feet, contains rooms for grain and storage, scales for weighing animals, and an electric motor for power. The barns are lighted by electricity and supplied with water and steam. The base-

ments of the barn contain storage rooms for manure and roots. The sheep barn, 125 x 20 feet, and contains six large pens, a nursery, and a storage-room. Two tool houses furnish 10,000 square feet of floor room for the storage of wagons and farm machinery. A modern piggery, 28 x 40 feet in size, has been erected, which contains eight pens, together with grain and feed-cooking rooms. The farm of the University of Maine is composed of two parcels of land aggregating 473 acres, of which 120 acres are under cultivation. The cultivated land is handled according to a definite system of rotation of crops, including hoed crops, nurse crops, and hay crops. The hay acreage cuts considerably more than 150 tons annually. It is the aim of the management to make the farm support the live stock maintained upon it. The areas of permanent pasture land form a considerable part of the farm and the remainder is given up to forest and orchard areas. Highmoor Farm purchased by the State Legislature for the use of the Experiment Station, is described under that department of the University.

Horticultural Building.—The range of greenhouses just east of Holmes Hall covers about 4000 square feet of surface. The building is heated with steam and furnishes opportunity for a demonstration of the practical culture of flowers and vegetables under glass.

Infirmary.—A wooden building has been erected in the rear of Hannibal Hamlin Hall to be used in caring for any cases of infectious disease that may appear among the students. It contains a ward for women as well as one for men, with sanitary, comfortable, and convenient equipment for patients.

Observatory.—The astronomical observatory stands upon a slight elevation to the east of Alumni Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving clock, filar micrometer, and other accessories. In the transit room is a combined transit instrument and zenith telescope of three-inch aperture, constructed by Bomberg, and a Respold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction both in descriptive and practical astronomy.

Poultry Plant.—The incubator house of the College of Agriculture consists of a two and a half story building, 25 x 40 feet, the lower portion of which is designed for an incubator room and is built of brick with non-conducting walls. On the upper floor is located a poultry laboratory. Attached to this building is a brooder house, 15 x 40 feet,

for winter brooding, equipped with a hot water heater. The fattening and killing house is 14 x 45 feet, with an interior arrangement to demonstrate crate fattening. A room 14 x 16 feet in one end of this house is used for a poultry dressing room, and is equipped with water heater and cooling tanks. The several breeds of poultry kept by the College of Agriculture are housed in colony houses of various styles and sizes, and one long laying-house, 14 x 96 feet, divided into twelve pens especially adapted for instructional purposes. The poultry plant belonging to the Experiment Station contains an incubator house 31 x 31 feet, with tenement above; a poultry house, 12 x 150 feet; a poultry house, 16 x 120 feet; a two-story house, 39 x 39 feet, containing three laboratories, feeding rooms, and storage rooms; a building containing a hospital for hens, 16 x 36 feet, and rooms for digestion experiments. The houses accommodate 700 mature birds. There are also detached brooder houses capable of caring for 2500 chicks.

Athletic Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus, about 1,200 feet from the gymnasium. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, baseball, and track and field athletics. The grand-stand constructed in 1914, is 268 feet long, 20 feet high, with a seating capacity of 2100. It is of reinforced concrete construction, with wooden seats 18 inches high and 14 inches wide and with 18 inches space for passages. The isles are about 30 feet apart. The front line of the stand is three feet from the south side of the running track. The frontwall is about four feet high and the front row of seats about 3 1-2 feet above the ground level and is separated from it by a four feet walk. Provision has been made so that a roof can be added if desired.

There is also an out-door board running track 390 feet long by 12 feet wide.

Central Heating Plant.—The central heating station is located across the car tracks from the university buildings, on low ground so that the buildings drain by gravity to the plant, thus saving the pumping or lifting of the returns. The station is a plain red brick structure, large enough to provide room for present needs and allow for future installation of engines and generators to furnish light and power for

the University. It contains four 150 h. p. boilers, two Worthington duplex reurn pumps, and scales for weighing coal. This plant supplies heat to nearly all the university buildings.

Fraternity Houses.—The local chapters of Beta Theta Pi, Delta Tau Delta, Kappa Sigma, Phi Gamma Delta, Phi Kappa Sigma, Sigma Alpha Epsilon, Theta Chi, and the Phi Eta Kappa society have built houses on the campus; the local chapter of Sigma Nu leases a house on the campus from the University; the local chapter of Lambda Chi Alpha owns a house adjoining the campus on College Street, and the local chapters of Alpha Tau Omega and Sigma Chi own houses on North Main Street. These houses accommodate from 25 to 35 students each.

Power House.—This wooden building, 30 by 56 feet, north of Alumni Hall, formerly the power and heating plant of the University, is now used exclusively for laboratory purposes in connection with the department of Mechanical Engineering. It contains two boilers, a one hundred and fifty horse-power Babcock and Wilcox and an eighty-five horse-power Otto gasolene engine, a plain slide valve engine, and two dynamos with operating switchboard.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, and five residences occupied by members of the faculty.

THE LIBRARIES

The university libraries contains more than 54,000 volumes, of which over 48,000 are in the general library, nearly 4,000 in the Agricultural Experiment Station, and nearly 4,000 in the law library. All of the Station library books are placed on the shelves of the general library except those required for constant reference by members of the Station staff. The law library is at the College of Law, Bangor. No other departmental libraries are maintained but books required by departments are taken by them from the general library for temporary use.

The general library provides a very good working collection of books. The greater part have been secured by purchase, and more than half have been added within the last ten years. Most of the books bought are selected by heads of departments to meet the needs of students and the teaching staff. Many valuable sets of general, scientific, and technical periodicals are included in the collection. The Station library is

of much value, including many sets of scientific journals. The law library is a carefully selected and useful collection, made since the Bangor fire of 1911, when the former library was completely destroyed. More than five hundred magazines and other serial publications are received regularly by the libraries.

The valuable horticultural library of Profesor Welton M. Munson, a member of the university faculty from 1890 until 1907, was bequeathed by him to the University. The private mathematical library of President R J. Aley, and a considerable portion of the library of the late Professor H. M. Estabrooke, the latter particularly strong in English literature and languages, are deposited in the general library where they are available for use.

The libraries are classified by the Dewey decimal system, modified for certain classes. There is a card catalog, author, subject, and title. No restrictions are placed upon admission to the stacks.

The general library is open daily, during the academic year, from 8.00 A. M. to 5.30 P. M., and from 7.00 to 9.30 P. M., except Sundays and holidays. It is open Sunday afternoons from 2.30 to 5.30 and on holidays from 8.00 A. M. to 12.00 M. During the Summer Term it is open daily from 8.00 A. M. to 5.30 P. M., except Saturday afternoons and Sundays, and during vacations it is open daily, except Sundays and hoildays, for somewhat shorter hours.

Students may borrow three volumes at a time, to be retained three weeks; if more are desired, application should be made to the Librarian. Officers of the University may borrow any reasonable number of volumes, without time limit, except that all books must be returned to the library nine days before Commencement. Other responsible persons may obtain the privileges of the library upon application to the Librarian.

It is the desire of the university authorities to make the general library as useful as possible to all citizens of the State, so that books are loaned to individuals and organizations when this may be done without interfering with the needs of faculty and students, the borrower paying transportation charges in both directions.

The libraries of the University, on June 30, 1914, numbered 55,445 volumes, made up as follows:

General Library	45,990
Agricultural Experiment Station Library	4,078
Estabrooke Library	537
Aley Mathematical Library	714
Law Library	4,126
Total	55,445

Libraries

The title of the Estabrooke and Aley libraries does not vest in the University, but the volumes in them may be used under the same regulations as those in the General Library. The Agricultural Experiment Station library is shelved in the Library Building, with the exception of a few books required for constant reference in the Station laboratories; they may not be taken from the building without special permission, except by members of the Station staff. The Law Library is kept in Stewart Hall.

The classification of the libraries is shown by the following table:

Bibliography	374
Library Economy	160
Encyclopedias	200
General Periodicals	2,634
Philosophy	655
Religion	641
Sociology	3,467
Military Science	519
Education	1,780
Philology	746
Natural Science (general and miscellaneous)	1,217
Mathematics and Astronomy (including Aley Library)	1,691
Physics (omitting Electricity)	783
Chemistry and Chemical Technology	1,568
Geology	986
Biology	603
Botany	839
Zoölogy	1,163
Useful Arts (general and miscellaneous)	835
Medicine (including Physiological and Biological Chemistry)	1,069
Pharmacy	229
Engineering (general)	1,087
Mechanical Engineering	651
Civil Engineering	875
Electrical Engineering (including Electricity)	591
Agriculture	6,657
Forestry	454
Home Economics	205
Fine Arts	608
Literature (general and miscellaneous)	751
American Literature	611
English Literature	1,507
Germanic Literature	1,902
Romance Literature	741
History (general and miscellaneous)	319
Geography and Description	623
Biography (general)	222
Ancient History	180

European History	790
American History	1,462
Miscellaneous public documents	8,746
Estabrooke Library, uncataloged	178
Law	4,126
Total	55,445

In addition to the above, there are about 12,000 pamphlets in the General Library.

MUSEUM OF NATURAL HISTORY

MINTIN ASBURY CHRYSLER

Curator of the Botanical and Zoölogical Collections

LUCIUS HERBERT MERRILL

Curator of the Geological Collections

The museum occupies the wing of Coburn Hall and an adjoining room in the main part of the building.

Geological Collections.—These collections, occupying the upper floor except on Saturdays and Sundays. They include the more important of the wing of Coburn Hall, are accessible daily during the college year, fragmental, crystalline, and volcanic rocks; a collection of building stones; a series designed to illustrate the rocks of the State; a general collection of more common minerals; a collection of economic minerals furnished by the United States National Museum, an educational series of rocks furnished by the United States Geological Survey; and a small collection of plant and animal fossils.

The part of the museum illustrating the mineral resources of the State may be made of great value, both from the scientific and economic standpoint. Students and others residing in the State are urged to contribute specimens from their home localities. Valuable accessions have been received from the United States National Museum.

Zoölogical Collections.—These collections occupy the lower floor of the wing of Coburn Hall. Some of the alcoholic and formalin material is placed in wall cases in the biological laboratories. The collections consist of a number of the larger mammals of the States; a small set of exotic mammals; a more complete working collection of native birds, birds' nests, and eggs; an illustrative collection of the other groups of vertebrates; a rather large collection of the shells of native and exotic molluscs; and illustrative collections of the other groups, dry, alcoholic, and prepared as microscopic objects.

During the past year a large case containing a set of three caribou has been installed. The animals forming this group were secured by Mr. C. S. Winch as the result of an expedition to New Brunswick in November 1910, and illustrate a species which was once common in this state but has apparently become extinct.

Botanical Collections.—These collections are situated in rooms on the second and third floors of Coburn Hall The herbarium includes several collections of considerable value, the most important of which is the one presented to the University by Mr. Jonathan G. Clark, of Bangor, and made by the late Rev. Joseph Blake. It contains more than 7,000 species of both flowering and flowerless plants, and represents more especially the flora of Maine and other New England states, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algæ of the Maine coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwoor's Hepaticæ, Cummings and Seymour 'North American Lichens, and a collection of economic seeds prepared by the United States Department of Agriculture.

Collections other than the herbarium include exhibits illustrating the manufacture of paper and of cocoa, the wood and bark features of the timber trees of Maine, conifers mounted in jars, plants used in pharmacy, commercial fibres, and artificial silk. A valuable collection of fossil plants was presented by the late Professor Harvey.

ART COLLECTION

The collection consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a fitting home in the Library Building, the gallery of which is well adapted to the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the large lecture room, and in a seminar room. In the latter is a specially constructed cabinet for the mounted photographs.

The entire collection numbers upwards of 4,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, and Venetian schools are particularly representative. For much of the most important work the photographs are supplemented by lantern slides.

The University possesses many of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames which are stucco copies of the originals in Dresden and Florence.

The large lecture room in the Library Building contains examples of the work of the chief Florentine and Umbrian masters of the 14th and 15th centuries, arranged on the walls in historical sequences. The gallery of the second floor is devoted to masters of the High Renaissance.

For the study of Greek and Roman antiquity the departments of Greek and Latin have a large collection of photographs and lantern slides.

ORGANIZATIONS

..Agricultural Club.—This organization is composed of students taking agricultural courses. Meetings are held throughout the college year, at which important agricultural topics are discussed by members of the club, and also by prominent speakers from this and other states.

American Chemical Society.—The Maine Section of the American Chemical Society has its headquarters at Orono. Some students in the department of Chemistry are members, and all are welcome to its meeting.

American Institute of Electrical Engineering.—This is an organization for the promotion of the student's interest in electrical engineering work, and to keep him in touch with the latest developments in this branch of engineering activity. Membership in the branch is extended to members of the Electrical Engineering faculty, students pursuing the Electrical Engineering curriculum; and to members and associate members of the American Institute.

American Society of Mechanical Engineers.—A regularly organized branch of this society holds regular meetings for the presentation and discussion of enginering papers by members and by visiting engineers.

Cercle Français.—The object of the Cercle Français of the University of Maine is to cultivate the spoken French language and arouse and stimulate an interest in the intellectual life of France among the students of the University. The work is carried on in French. Papers are read and discussed and addresses delivered by the members. Plays are studied with a view toward production in French. The Cercle Français meets once in two weeks.

University of Maine Society of Civil Engineering.—This society is composed of the students who are enrolled in the curriculum in Civil Engineering. The object of the society is to investigate by reading and discussion the various engineering topics of the day. Monthly lectures are given under the direction of the society by members of the faculties of this and other institutions and by practicing engineers.

The affairs of the society are controlled by the students under the advice of the department.

Deutscher Verein.—This society, organized in 1902, is composed of teachers and students. Its purpose is to stimulate interest in the various phases of German life and literature and afford practice in speaking German. The number of members is in practice limited. Meetings are held every three weeks during the academic year.

Forestry Club.—All students majoring in the curriculum in forestry are eligible for membership in the Forestry Club. The purpose of the club is to give an opportunity for presenting informal discussions and technical papers on forestry subjects, and to promote coöperation and general good fellowship among the forestry students. The meetings are semi-monthly.

Maine Masque.—This is a dramatic club which aims to make a practical study of the acted drama, and to present each year before the public one or more representative plays. Membership is determined by competitive trials to which all men undergraduates are eligible.

Pharmaceutical Association.—All students majoring in pharmacy are eligible for membership in this association. Meetings are held semi-monthly. The object of the association is to investigate by reading and informal discussions the various pharmaceutical topics of the day. Lectures are given at various times during the year by men prominent in the profession.

Christian Association.—The Christian Association, composed of men students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Library Building and classes for the study of the Bible are conducted on Sunday.

Young Women's Christian Association.—This is an organization for religious work composed of women students.

Alpha Chi Sigma.—Alpha Chi Sigma is a professional fraternity with chapters in various American colleges and universities. The members are elected from those whose major work is in the department of Chemistry.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in fourteen other universities. Membership is honorary and is restricted to those attaining high class standing or to those who have shown marked ability along the lines of agricultural study and research.

Phi Kappa Phi.—The Phi Kappa Phi is an honorary society. At the end of the spring semester of the junior year the five members of the class having the highest standing are elected members, and at the end of the fall semester of the senior year the five next highest in the collegiate departments, and two from the College of Law, are added.

Tau Beta Pi.—Tau Beta Pi is an honor fraternity for engineers and has chapters in leading universities and technical schools. Elections to the fraternity take place twice a year, and are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

UNIVERSITY PUBLICATIONS

Annual Report of the Trustees, President, and Treasurer, to the Governor and Council of the State.—The report of the Trustees and President includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station.

University of Maine Studies.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

Maine Bulletin.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public. Among recent issues are bulletins relating to the Classical Curriculum, the Curricula in Agriculture, the Curriculum in Pharmacy, the College of Law, the College of Arts and Sciences, the College of Technology, the Curriculum in Forestry, the Courses in Education, the Summer Term, and an Alumni Directory.

Timely Helps for Farmers.—This is a monthly publication issued in the interest of the farmers and schools of the State by the division of Agricultural Extension.

Annual Report of the Experiment Station and the Experiment Station Bulletins.—These give complete results of the work of investigation of the Station.

Official Inspections.—These are published by the Experiment Station, and contain the results of the work of inspection of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs, foods, fungicides, and insecticides. The Bulletins and Official Inspections are sent free on request to any resident of Maine.

Maine Campus.—This is a journal published semi-weekly during the academic year by an association of the students.

Prism.—The Prism is an illustrated annual, published by the junior class.

Practical Husbandry.—This is a quarterly magazine published under the direction of the Agricultural Club. It is devoted to practical and technical agriculture.

Maine Law Review.—This is a magazine published under the direction of the students of College of Law. It is devoted to a discussion of law cases and other current legal problems.

MILITARY INSTRUCTION

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States for this purpose. United States army rifles, model 1898, ammunition, and accoutrements are furnished by the War Department. The course makes especial preparation for the duties of infantry officers of the line. The students are organized into an infantry battalion of six companies and band, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered, and the minimum time that must be devoted to this instruction.

The uniform prescribed by the Board of Trustees is as follows:

For commissioned officers, the olive-drab service uniforms prescribed for infantry officers of the United States Army, except that "Maine" insignia and butons are used; for non-commissioned officers and privates, the olive-drab service uniforms of the United States Army, except that

"Maine" insignia and buttons are used, and trousers instead of breeches. The total cost of the uniform is $14.15. The uniforms are procured through an authorized tailor, and are made in the best manner, of thoroughly good material. Cadets are required to wear the uniform when on military duty.

The three seniors who attain the highest standing in the military department are reported to the Adjutant General of the United States Army, and their names are printed in the Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of the state in which they reside.

With the exceptions noted below, all men students physically qualified are required to take military work for three hours a week during their first and second years at the University. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years course. After the freshmen and sophomore years the work is elective. Students in the College of Law, the School Course in Agriculture, the two years curriculum in Pharmacy, and graduate students are excused from military work.

PHYSICAL TRAINING

Physical training is required of freshmen three hours per week. All other students may elect this work and receive credit. Students registered on athletic teams are excused during the regular athletic training, but no credit will be given unless the physical training is taken for the remainder of the year. Every student who registers for an athletic team must first pass a required physical examination.

The gymnasium affords excellent opportunity for physical training. On the first floor are the main offices, the office of the director, the baseball cage, lockers, bath rooms, and toilet rooms. The gymnasium proper is located on the second floor. It is supplied with an equipment of modern apparatus for heavy and light gymnastic work. There is floor space of 6,262 square feet, and an overhead running track.

The athletic field is situated a short distance from the gymnasium; it has a quarter-mile running track with a 220-yard straightaway, and is graded and laid out for football, baseball, and track and field athletics. Here men may exercise for recreation or train for active competition.

There are several tennis courts on the campus. On the Stillwater River canoeing may be enjoyed, as well as skating and ice hockey in the winter.

All students exercising at class hours wear a regulation suit.

It is the aim of the department to encourage participation in all forms of athletic sport. In this way the benefits will become less and less confined to the few who need them least.

Instead of requiring gymnasium work of students who do not particularly need it, those who are physically fit are encouraged to register for athletic teams, with whose supervision the department is charged.

PUBLIC WORSHIP

Short exercises are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services are held each week under the direction of the Christian Association and the Young Women's Christian Association.

GENERAL INFORMATION

It is assumed that all students entering the University are willing to subscribe to the following: *A student is expected to show both within and without the University respect for order, moralty, and the rights of others; and such sense of personal honor as is demanded of good citizens and gentlemen.*

A pamphlet containing information in regard to the selection of studies, standings and grades, absences from recitations and examinations, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, athletics, and student organizations may be obtained from the Registrar.

The quota of regular studies for each student varies from the minimum of fourteen hours to a maximum of eighteen hours in the College of Arts and Sciences, and from a minimum of seventeen hours to a maximum of twenty-two hours in the College of Technology.

In the application of this rule, two or three hours of laboratory work count as one hour.

Each student is expected to be present at every college exercise for which he is registered, including each chapel exercise.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average grade of B after the freshman year. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree An honor course must involve at least ninety recitations, or an equivalent, and be completed in one year. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average of B in all previous work, and an average grade of A or B in all previous work of the department in which the honors are sought. A student may not register for an honor course later than the fourth week of the fall semester.

Upon the completion of a course, the student's work will be tested by an examination, or thesis, or both, under the direction of the faculty committee on honors, and the result, together with the instructor's report, will be laid before the faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, if the committee so desires, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory work may be tested by examination, or thesis, or both, at the discretion of the committee. The faculty may grant special honors to those students who receive the approval of the committee, but shall not do so if the general work is unsatisfactory. Honors and their nature are stated upon the Commencement program and published in the annual catalog.

DEGREES

Bachelors' Degrees.

The degree of Bachelor of Arts (B. A.), with specification of the major subject, is conferred upon all students who complete a curriculum in the College of Arts and Sciences. These students are required to

fulfill the proper entrance conditions and to obtain six credits in the department in which their major work lies.

The degree of Bachelor of Science, (B. S.), in the curriculum pursued is conferred upon students who complete the prescribed work of four years in the Colleges of Agriculture or Technology.

The degree of Bachelor of Pedagogy, (B. Pd.), is conferred upon students in the College of Arts and Sciences who have completed a course in an approved high school, a course in a normal school, and two years under prescribed conditions at the University.

The degree of Bachelor of Laws (LL. B.) is conferred upon students who complete the prescribed work in the College of Law.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students who complete the two-year Pharmacy curriculum.

Beginning with the entering class of 1914, the degree of Ph. G. (Graduate in Pharmacy) will be conferred upon students completing the prescribed two years curriculum. The entrance requirements for this curriculum will be raised gradually from two years of high school work now required to a complete high school course, by 1919. As soon as proper courses can be provided, a three years curriculum in Pharmacy will be established, leading to the degree of Ph. C., (Pharmaceutical Chemist) requiring for entrance the completion of a four years high school course

A minimum residence of one year is required for the attainment of any Bachelor's degree.

Advanced Degrees

Graduate students, whether candidates for a degree or not, are required to register at the office of the University at the beginning of each semester or term. Those entering the University after that date must obtain the consent of the committee on advanced degrees before they can count a full year's work.

Candidates for the degree of Master of Arts, Master of Science, or Master of Laws must have received the corresponding bachelor's degree from this institution, or from one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degree.

No work done before the conferring of the bachelor's degree shall be counted toward the master's degree.

The candidate shall devote at least one year to graduate resident study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The courses of study for each candidate must be approved by the committee on advanced degrees not later than the fourth week of the semester or term.

A registration fee of $5 is charged, and an additional fee of $15 for examinations and diplomas is payable upon the completion of the work. One registration fee only is required of graduate students.

The curriculum shall include work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects which bears a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject. In special cases all the work may be done in one department.

All of the work must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

The candidate shall prepare as a part of his curriculum a satisfactory thesis on some topic connected with the major subject. Theses must be deposited with the Dean of the University not later than 12 M. Monday of the week preceding Commencement. The same regulations regarding the size and styles of binding, outlined under the bachelor's degree apply here.

At the end of the course of study for the master's degree, the candidate will be required to pass an oral examination covering his work, including the thesis work. This examination shall be open to all voting members of the faculty of the University. The time for such examinations will be arranged by the Dean of the University to accord, so far as possible, with the convenience of the candidate and the major instructor, between the dates of May 15 and June 1. On May 15, the Dean of the University will notify the heads of all departments of the University of the dates set for the public oral examinations of all candidates of the year. While the examination will in each case, as a matter of course, be conducted chiefly by the members of the department in which the work has been done, any member of the faculty present at the examination has the privilege of questioning the candidate. The Committee on Graduate Study will be represented at each examination.

The professional degrees of Chemical Engineer (Ch. E.), Civil Engineer (C. E.), Electrical Engineer (E. E.), and Mechanical Engineer (M. E.) may be conferred upon graduates in the curricula in Chemistry

or Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering respectively, upon the presentation of satisfactory theses, after at least three years of professional work subsequent to graduation. During at least two of the years after graduation the candidate must have occupied a position of responsibility. A fee of $5.00 is required at the time of registration. A fee of $10.75 is required payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

THESES

Theses shall be printed, or typewritten in black record unless the subject matter prevents, and the paper used shall be a standard thesis paper 8 x 10 1-2 inches, which may be procured at the University Store. Care should be taken to have a margin of one inch on the inner edge, at least one-half on the outer edge, one and one-half inches at the top and one inch at the bottom of the page.

If drawings accompany the thesis they may be bound in with the rest of the pages or placed in a pocket on the inside of the back cover; or if too many for this, they may be bound separately according to personal instructions of the head of the department.

STUDENT EXPENSES

The estimates are prepared upon the basis of students living in university halls.

ESTIMATE OF ANNUAL EXPENSES FOR MEN

	Students from within the State	Students from without the State
Registration	$10 00	$10 00
Incidentals	20 00	20 00
Tuition	30 00	40 00 to $70 00
Laboratory fees	10 00 to $25 00	10 00 to 25 00
Text-books	10 00 to 30 00	10 00 to 30 00
Board 36 weeks @ $3.50	126.00	126.00
Room in a dormitory	36 00 to 45 00	36 00 to 45 00
	$242 00 to $286 00	$252 00 to $326 00

NOTE. The tuition charge of $70.00 is for technology students from without the State.

Estimate of Annual Expenses for Women

The expenses for women are the same as for men, except that the annual charge for board and room is uniformly $170.00.

Exceptions

By legislative enactment, students in agricultural and home economics curricula are exempted from the payment of tuition charges. This applies both to students from within and without the State. For such students the above estimates should be reduced by an amount equal to the tuition charge.

Details of Laboratory Fees.

The laboratory charges indicated above are made to cover cost of material used by the students. These charges vary with the subject and length of the course. They are as follows: Agronomy, per course $1.00 to $1.50; Animal Industry, per course, $1.00 to $4.00; Bacteriology, per course, $3.00; Biological Chemistry, $3.00 to $4.00; Biology, per course, $2.00 to $3.00; Chemistry, per course, $2.00 to $5.00; Civil Engineering, per course, $2.00 to $5.00; Electrical Engineering, per course, $2.50; Horticulture, per course, $1.00 to $2.00; Mechanical Engineering, per course, $2.00; Mineralogy, per course, $2.00; Pharmacy, per semester, about $3.50; Physics, per course, $2.50 to $3.50; Shop Work, per course, $4.00 to $5.00. Laboratory fees in Home Economics are stated in connection with the description of that department.

Special Charges

A fee of $2.00 is charged a student for each special examination.

Students registering after the prescribed day of registration shall pay an additional fee of two dollars. This applies to each semester of the Colleges of Agriculture, Arts and Science, and Technology; and each term of the College of Law.

Dormitory Rooms

The rooms in the Mt. Vernon House, Balentine Hall, Oak Hall, and the middle section of Hannibal Hamlin Hall accommodate two students each. All other rooms accommodate four students each.

Dormitory charges include steam heat and electric lights. The rooms in the dormitories for men are furnished with beds, mattresses, chiffoniers, desks, and chairs. Each resident in a dormitory has bed linen and three towels laundered each week without extra charge.

Women students not living at home are required to live in one of the women's dormitories. In exceptional cases women students are allowed to live at some boarding house approved by the President. To secure the reservation of a room in a university dormitory, application, accompanied by a deposit of $5.00, should be made on or before September 1.

Deposits to Cover Expenses

Each student on or before registration day is required to make a deposit in accordance with the following table:

	Students from within the State	Students from without the State
Students in Agriculture	$95 00	$95 00
Students in Forestry	110 00	115 00
Studetns in Home Economics...	95 00	95 00
Students in Arts and Sciences...	110 00	115 00
Students in Technology	110 00	130 00

For a student not living in a university dormitory the above deposits are reduced by $75.00.

Expenses at the College of Law

For expenses of students in the College of Law, see the article on that college.

Communications

Communications with reference to financial affairs of students should be addressed to the Treasurer of the University of Maine.

Blanket Tax

Students generally contribute $10.00 annually to the support of athletics and the Maine Campus. This is not a university requirement, but is wholly voluntary.

KITTRIDGE LOAN FUND

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittridge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in the three upper classes. In the deed of gift it was prescribed that no security but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest be paid promptly, and that the principal be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship, thirty dollars, was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University of the class of 1879, and is awarded to a member of the Junior class to be selected by the President and the Faculty.

New York Alumni Association Scholarship, thirty dollars, is awarded upon conditions to be determined by the Board of Trustees. It has for some years been awarded to the student who excelled in debate.

Pittsburg Alumni Association Scholarship, tuition for one year, is awarded to a member of the junior class in the College of Technology, to be selected by the Preisdent and the professors in that college.

Western Alumni Association Scholarship, tuition for the sophomore year, is awarded that student pursuing a regular curriculum whose deportment is satisfactory and who makes good progress in his studies during his freshman year.

Junior Exhibition Prize, fifteen dollars, is awarded to that member of the junior class who presents the best oration at the junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

Clarence P. King Prize, twenty-five dollars, the gift of Mr. Clarence P. King, of Washington, D. C., is awarded to that member of the senior and junior classes who delivers the best original oration.

Sophomore Declamation Prize, fifteen dollars, for excellence in elocution, is awarded to the best speaker in the sophomore class.

Walter Balentine Prize, fifteen dollars, the gift of Whitman H. Jordan, Sc. D., LL. D., Geneva, N. Y., a graduate of the University of the class of 1875, is awarded to that member of the junior class who excels in biological chemistry.

Kennebec County Prize, twenty-five dollars, the gift of Hon. William T. Haines, LL. D., Waterville, a graduate of the University of the class of 1876, is awarded to that member of the senior class who writes the best thesis on applied electricity

Franklin Danforth Prize, ten dollars, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University, of the class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the agricultural curricula who attains the highest standing.

Pharmacy Prize, five dollars, is awarded to that student in the Pharmacy department who attains the highest standing in chemistry in the last year of his course.

Holt Prizes, the gift of Dr. Erastus Eugene Holt, of Portland, are given to the three students of the senior class who show the greatest improvement in their physical rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body devised by Dr. Holt.

L. C. Bateman Prize, five dollars, is awarded to the student in the College of Agriculture who shall write the best newspaper article of one column length on "How to Keep the Boy on the Farm."

Lewiston Journal Prize, ten dollars, is awarded to a student in the College of Agriculture who shall write the best article on some topic connected with agriculture, the subject and conditions being left to the Dean of the College.

American Pharmaceutical Association Prize, free membership for one year in the Association, is awarded by the faculty to the member of the senior class in Pharmacy who has made the best record in his college course.

Father Harrington Prize, twenty dollars, established by Rev. John M. Harrington, pastor of St. Mary's Church, Orono, is given to that student who writes the best essay upon modern literature. It may treat of German, English, French, Spanish, or Italian literature. The essay may be limited to any one of these literatures or to a comparative study of any number of them. This is open to any student in the University.

Class of 1908 Commencement Cup is awarded each year to the class having the largest percentage of its membership present at Commencement.

Fraternity Commencement Cup is awarded to the fraternity, the largest percentage of whose alumni register during commencement week.

Fraternity Scholarship Cup, presented to the University by the 1910 Senior Skull Society, is awarded at Commencement to that fraternity having the highest standing in scholarship for the preceding calendar year. The cup is to be awarded for eleven years, 1910 to 1920 inclusive. The fraternity to which this cup is awarded the greatest number of times is to be the permanent owner of the cup.

Wingard Cup, the gift of Professor E. R. Wingard, is awarded to that student who has won his "M" in athletics, and who has made the greatest improvement in his studies during the year.

ADMISSION

General Requirements.—Candidates for admission should apply to the Registrar for an application card. They must present satisfactory certificates of fitness, or pass the required examinations, and make a cash deposit covering the bills of one semester. In the College of Law the fees must be paid in advance and no additional deposit is required. The University admits men and women, both residents of Maine and non-residents.

Admission to Advanced Standing.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they wish to enter, or in other equivalent studies. A rank of B must be attained in order to pass any course in advance. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. Students transferring from another college must present a letter of honorable dismission.

Admission to Short Courses

Candidates for the two years Curriculum in Pharmacy must be at least seventeen years of age, and must have successfully completed at least two years in an approved high school. Beginning with the entering class of 1914, the entrance requirements will be gradually raised to a complete high school course in 1919.

Candidates for the two years Course in Home Economics must be graduates of a recognized high school or its equivalent, and they should have some practical knowledge of housework.

Candidates for admission to the two years School Course in Agriculture must be over fifteen years of age and prepared for advanced grammar or high school work.

Admission by Examinations

Entrance examinations are held at Orono, beginning four days before the opening of the fall semester, and on the Wednesday, Thursday, Friday, and Saturday preceding Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct examinations on the days appointed in June. If possible, these examinations should be in charge of the principal of the school. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University immediately, accompanied by the endorsement of the examiner. The examination must be given on the days appointed in the schedule. Applications for such examinations must be made out on blanks to be obtained from the Registrar. Candidates for admission by examination, particularly those examined at Orono in September, should present statements from their school principals regarding their fitness to take the examinations and to undertake college work.

The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 14-19, 1915. All applications for these examinations must be addressed to the secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he offers not less than one-half of his preparatory work. It is advised that candidates avail themselves of this privilege as far as possible. Examinations on subjects which are to be continued in college should not be taken more than one year in advance.

Admission of Graduates from Class A Schools in Maine

Graduates from Maine high schools and academies placed by the State Superintendent of Schools in Class A may be admitted upon their school records, provided they have pursued a course of study including all the subjects required for admission to the college that they propose to enter and a sufficient number of the elective subjects to make a total of fourteen and a half units.

The school record of the candidate must be certified by the Principal, upon blanks furnished by the University, and should be submitted before August 1st.

Admission by Certificate from Schools Outside of Maine

Principals of schools situated outside of Maine who desire the certificate privilege must make application to the Dean of the University, and must furnish satisfactory evidence that the course of study in the school meets the requirements for admission. Blank forms for this purpose will be supplied on request.

Certificates will not be accepted for non-graduates except in unusual cases, and then only provided the candidate is expressly recommended for admission by the Principal of the high school from which he comes. Certificates must be made out on blanks furnished by the University.

ENTRANCE REQUIREMENTS

To gain admission to any of the curricula leading to the degree of Bachelor of Arts or Bachelor of Science, 14 1-2 units must be offered by the candidates, according to the following schedules (to count one unit, a subject must be pursued for one school year, with five recitation periods a week):

For the Bachelor of Arts Curricula

Required Subjects

Foreign languages	count 4	units
English	counts 3	"
History	" 1	unit
Mathematics	" 2½	units
	10½	units

Not less than two units of any foreign language may be offered. Credit for advanced work will be accepted at the rate of one unit for each year of work.

Optional Subjects (4 units to be chosen)

Greek	counts	2 or 3	units
Latin	"	2, 3, or 4	"
French	"	2, 3, or 4	"
German	"	2, 3, or 4	"
Advanced algebra	"	½	"
Solid geometry	"	½	"
Trigonometry	"	½	"
Chemistry (including note-book)	"	1	"
Physics (including note-book)	"	1	"
Physiography (one-half or one year)	"	½ unit or 1	"
Biology (including note-book)	"	1	"
Botany (including note-book)	"	1	"
Zoölogy (including note-book)	"	1	"
Physiology	"	½	"
Ancient history (1 year)	"	1	"
English history (1 year)	"	1	"
American history and civil government (1 year)	"	1	"
Mediæval and modern history	"	1	"

The requirement in history must include a year of Greek and Roman history, or a year of English history, or a year of mediæval and modern history, or a year of American history and civil government. A choice will be allowed between the last half year of algebra and solid geometry for those who do not expect to continue mathematics in college.

For the Bachelor of Science Curricula

Required Subjects

English	counts	3	units
*Algebra	"	1½	"
Plane geometry	"	1	unit
Solid geometry (College of Technology except Pharmacy)	"	½	"
French, German, or Spanish (two years of one language)	"	2	units
Sciences	"	1	unit
History	"	1	"
		10	units

*Candidates who have had two full years of algebra, including a review during the last year, and the use of an advanced text-book, may receive credit of two units. Such a course is recommended for those who wish to pursue a curriculum in engineering or chemistry.

Optional Subjects (4 1-2 or 5 units to be chosen)

Candidates entering a B. S. curriculum and offering four years of Latin may complete their entrance credits without a modern language, but must take in college the equivalent of the modern language entrance requirement in addition to the language scheduled in their college curriculum.

Each year of French	counts	1	unit
" " " German	"	1	"
" " " Latin	"	1	"
" " " Greek	"	1	"
Advanced algebra	"	½	"
Trigonometry	"	½	"
†Mechanical drawing (for technical courses)	"	½	"
†Manual training (for technical courses)	"	½	"
Chemistry (including note-book)	"	1	"
Physics (including note-book)	"	1	"
Physiography (one-half year or one year)	counts ½ unit or	1	"
Biology (including note-book)	counts	1	"
Botany (including note-book)	"	1	"
Zoölogy (including note-book)	"	1	"
Physiology	"	½	"
Roman history	"	½	"
Greek history	"	½	"
English history	counts ½ or	1	"
American history and civil government	" ½ "	1	"

† Graduates from high schools giving a full manual training course may receive credit for mechanical drawing, manual training, and free-hand drawing, on the basis of one-half unit for five forty-five minute periods per week for one year in one subject taken in the high school.

Candidates for admission to any curriculum, who are well prepared in all the required subjects, but whose high school course has included studies other than the electives mentioned above, will be allowed to substitute such as will furnish a real equivalent. Each case of proposed substitution will be considered upon its merits.

Credit for industrial and commercial subjects may be given at the discretion of the committee on admission. The total credit for these subjects will be limited to four units for admission to B. S. curricula and to two units for B. A. curricula.

REQUIREMENTS IN DETAIL

The following statement shows in detail the requirements in each subject:

Languages

ENGLISH.—The entrance examination in English presupposes courses in composition and English literature pursued in the high school during four years. Prospective students are warned against attempting to prepare the required work in one year. Progress in composition particularly is of slow growth, and requires almost daily cultivation during a long period of time. Books, to be thoroughly enjoyed and appreciated, should be read leisurely and under favorable circumstances.

Rhetoric.—Candidates are expected to have had practice in composition for at least three days a week during the whole four years of the high school, and to have included in the latter part of their course such work in the elements of rhetoric, as for example, is contained in Carpenter's Rhetoric and Composition.

Grammar.—The examination will include questions on the syntax of sentences, and on general grammatical principles.

Weight of Composition.—The examination is mainly designed to test the candidate's ability to express his thought correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Prospective candidates are advised to give especial attention to spelling, punctuation, grammatical correctness, idiomatic words and phrases, sentence and paragraph formation.

Subjects.—The subjects for the short compositions will be taken from the A list of books; also from the candidate's general knowledge and experience.

The prescribed books are those adopted by the Conference on Uniform Entrance Requirements. The A list is for general *reading.* The candidate is not expected to have a detailed knowledge of these books, but such acquaintance with them as naturally follows intelligent and appreciative reading. For 1913-1915 the books in the A list are as follows:

Two books to be selected from each group.

GROUP I

(For any unit of this group a unit from any other group may be substituted). Old Testament—Comprising the chief narrative episodes

in Genesis, Exodus Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther. Homer—The Odyssey. (English translation.) With the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, (English translation) with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI. Virgil—Æneid. (English translation).

Group II

Shakespeare—Merchant of Venice, Midsummer-Night's Dream, As You Like It, Twelfth Night, King Henry V, Julius Cæsar.

Group III

Defoe—Robinson Crusoe, Part I. Goldsmith—The Vicar of Wakefield. Scott—Ivanhoe or Quentin Durward. Hawthorne—The House of the Seven Gables. Dickens—David Copperfield, or A Tale of Two Cities. Thackeray—Henry Esmond. Gaskell (Mrs.)—Cranford. Eliot, George—Silas Marner. Stevenson—Treasure Island.

Group IV

Bunyan—Pilgrim's Progress, Part I. Addison, Steele, and Budgell—The Sir Roger de Coverley Papers in "The Spectator." Franklin—Autobiography. Irving—Sketch-Book. Macaulay—Essays on Lord Clive and Warren Hastings. Thackeray—English Humorists. Lincoln—Selections from, including the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate. Parkman—The Oregon Trail. Thoreau—Walden. Huxley—Autobiography and Selections from Lay Sermons, including the Addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk. Stevenson—An Inland Voyage, and Travels with a Donkey.

Group V

Palgrave—Golden Treasury (First Series), Books II and III, with especial attention to Dryden, Collins, Gray, Cowper, and Burns. Gray—An Elegy in a Country Churchyard, and Goldsmith—The Deserted Village, combined. Coleridge—The Rime of the Ancient Mariner, and Lowell—The Vision of Sir Launfal, combined. Scott—The Lady of the Lake. Byron—Childe Harold, Canto IV, and the Prisoner of Chillon

Palgrave—Golden Treasury (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley. Poe—The Raven; Longfellow—The Courtship of Miles Standish, and Whittier—Snow Bound, combined. Macaulay—Lays of Ancient Rome, and Arnold—Sohrab and Rustum, combined. Tennyson—Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur. Browning—Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Riel, Pheidippides, My Last Duchess, Up at a Villa, Down in the City.

The B list is for *study:* Shakespeare's Macbeth; Milton's Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America, or Washington's Farewell Address, and Webster's First Bunker Hill Oration; Macaulay's Life of Johnson, or Carlyle's Essay on Burns.

French.—The admission requirements in elementary and intermediate French are those recommended by the Modern Language Association of America.

I. Elementary French.—At the end of the second year the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

The first year's work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs; prepositions, and conjunctions; order of words in the sentences, and elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (4) the reading of 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

The second year's work should comprise: (1) the reading of 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About, *le Roi des montagnes;* Bruno, *le Tour de la France;* Daudet, Easier Short Tales; De la Bédollière, *La Mère Michel et son chat;* Erckmann-Chatrian's Stories; Foa, *Contes biographiques* and *le Petit Robinson de Paris;* Foncin, *le Pays de France;* Labiche and Martin, *la Poudre aux yeux* and *le Voyage de M. Perrichon;* Legouvé and Labiche, *la Cigale chez les fourmis;* Malot, *Sans famille;* Mairet, *la Tâche du petit Pierre;* Mérimée, *Colomba;* Extracts from Michelet; Sarcey, *le Siège de Paris;* Verne's Stories.

II. Intermediate French.—At the end of the third year the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

This should comprise the reading of 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate proportions; writing from dictation.

Suitable texts are: About's Stories; Augier and Sandeau, *le Gendre de M. Poirier;* Béranger's Poems; Corneille, *le Cid* and *Horace;* Coppée's Poems; Daudet, *la Belle Nivernaise;* La Brète, *Mon oncle et mon curé;* Madame de Sévigné's Letters; Hugo, *Hernani* and *la Chute;* Labiche's Plays; Loti, *Pêcheur d'Islande;* Mignet's Historical Writings; Molière, *l'Avare* and *le Bourgeois gentilhomme;* Racine, *Athalie, Andromaque* and *Esther;* George Sand's Plays and Stories; Sandeau, *Mademoiselle de la Seiglière;* Scribe's Plays; Thierry, *Récits;* Vigny, *la Canne de jonc;* Voltaire's Historical Writings.

At the end of the fourth year the pupils should be able to read at sight, with the help of a vocabulary of special or technical expressions,

difficult French not earlier than that of the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to put into French a passage of easy English prose, and to carry on a simple conversation in French.

This should comprise the reading of from 600 to 1,000 pages of standard French, classical and modern, only difficult passages being explained in the class; the writing of numerous short themes in French; the study of syntax.

Suitable reading matter will be: Beaumarchais's *Barbier de Séville;* Corneille's Dramas; the elder Dumas's Prose Writings; the younger Dumas's *la Question d' argent;* Hugo, *Ruy Blas,* Lyrics, and Prose Writings; La Fontaine's Fables; Lamartine, *Graziella;* Marivaux's Plays; Molière's Plays; Musset's Plays and Poems; Pellissier, *Mouvement littéraire au XIX siècle;* Renan, *Souvenirs d' enfance et de jeunesse;* Rousseau's Writings; Sainte-Beuve's Essays; Taine, *Origines de la France contemporaine;* Voltaire's Writings; Selections from Zola, Maupassant, and Balzac.

The examination of the College Entrance Certificate Board in elementary French will be accepted for two units, and that in intermediate and advanced French for two additional units.

GERMAN.—The admission requirements in elementary and advanced German are those recommended by the Modern Language Association of America.

I. Elementary German.—The first year's work should comprise: (1) careful drill upon pronunciation; (2) memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar; that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more unusual strong verbs; also in the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in reproducing natural forms of expression; (5) the reading of 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in reproducing from memory sentences previously read.

The second year's work should comprise: (1) the reading of 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in translating into German easy variations upon the matter read, also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill in the rudiments of grammar, to enable the pupil first, to use his knowledge with facility in forming sentences, and second, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Anderson, *Märchen* and *Bilderbuch ohne Bilder;* Baumbach, *Die Nonna* and *Der Schwiegersohn;* Gerstäcker, *Germelshausen; Heyse, L'Arrabbiata, Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern, *Höher als die Kirche;* Jensen, *die braune Erica;* Leander, *Träumereien* and *Kleine Geschichten;* Seidel, *Märchen;* Stokl, *Unter dem Christbaum;* Storm, *Immensee* and *Geschichten aus der Tonne;* Zschokke, *Der zerbrochene Krug.*

The best shorter plays available are: Benedix, *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz, *Er ist nicht eifersüchtig;* Wichert, *An der Majorsecke;* Wilhelmi, *Einer muss heiraten.* Only one of these plays need be read, and the narrative style should predominate. A good selection of reading matter for the second year would be Andersen, *Märchen* or *Bilderbuch,* or Leander, *Träumereien,* to the extent of about forty pages. Afterward, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; last *Der Prozess.*

II. Advanced German.—The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill in the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with especial reference to the infinitive and subjunctive), and likewise in word order and word formation. To do this work two school years are usually required.

Suitable reading matter for the third year may be selected from such work as the following: Ebner-Eschenbach, *Die Freiherren von Gemperlein;* Freytag, *Die Journalisten* and *Bilder aus der deutschen Ver-*

gangenheit, Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen; Fouqué, *Undine;* Gerstäcker, *Irrfahrten;* Goethe, *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffman, *Historische Erzählungen;* Lessing, *Minna von Barnhelm;* Meyer, *Gustav Adolfs Page;* Moser, *Der Bibliothekar;* Riehl, *Novellen, Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger, *Waldheimat;* Schiller, *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel, *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch, *Das edle Blut.* A good selection would be: (1) one of Riehl's novelettes; (2) one of Freytag's "pictures;" (3) part of *Undine* or *Der Geisterseher;* (4) a short course of reading in lyrics and ballads; (5) a classical play by Schiller, Lessing, or Goethe.

The examinations of the College Entrance Certificate Board in elementary German will be accepted for two units, and that in advanced German for one additional unit.

Latin.—The entrance examination in Latin will consist of four parts as follows:

1. An examination on the elements of Latin grammar and easy translations.

2a. An examination in sight translation of Latin prose suited to test the ability of a candidate who has read from Cæsar (Gallic War and Civil War) and Nepos (Lives) an amount not less than Cæsar, Gallic War, I-IV.

b. Questions on the ordinary forms and constructions of Latin grammar and the translation of easy English sentences into Latin.

3a. An examination on Cicero, speeches for the Manilian Law and for Archias, with questions on subject-matter, literary and historical allusions, and grammar.

b. An examination in sight translation of Latin prose adapted to candidates who have read from Cicero (speeches, letters, and De Senectute) and Sallust (Catiline and Jugurthine War) an amount not less than Cicero, speeches against Catiline I-IV, for the Manilian Law, and for Archias.

c. A test in writing simple Latin prose which shall demand a thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school.

4a. An examination on Vergil, Æneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody.

b. An examination in sight translation of Latin poetry adapted to candidates who have read from Vergil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia) an amount not less than Vergil, Æneid, I-VI.

A candidate may obtain separate credit for each part except in the College of Arts and Sciences. Each represents a year's work and entrance credit for one unit.

In parts 2 and 3 candidates must deal satisfactorily with both the sight and set passages, or they will not be given credit for either.

GREEK.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of less usual words will be furnished. Equivalent readings will be accepted in place of those prescribed.

History

GREEK HISTORY.—History of Greece, to the capture of Corinth, 146 B. C.; Myers, Morey, or Botsford.

ROMAN HISTORY.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery, Coman and Kendall, Terry, or Cheyney's History of England.

UNITED STATES HISTORY AND CIVIL GOVERNMENT.—A knowledge such as may be obtained from the works of Fiske, Hart, Montgomery, or McLaughlin.

Mathematics

ALGEBRA.—The four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and least common multiple by factoring; fractions, including complex frac-

tions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending on quadratic equations; the binomial theorem for positive integral exponents; the formulas for the nth term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils are required throughout the course to solve numerous problems which involves putting questions into equations. Some of these problems should be chosen from mensuration, from physics and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Plane Geometry.—The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

Advanced Algebra.—Permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numeri-

cal equations of higher degree, and so much of the theory of equations with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

Sciences

* Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoölogy alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoölogy; but in such cases it must be treated as an integral part of the subject under consideration.

* Chemistry.—The necessary ground is covered by the following textbooks; Brownlee and others, Hessler and Smith, McPherson and Henderson, Newell.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

* Physics.—The work usually covered in one year in a good fitting school.

The requirements in botany and zoölogy are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the board. The note-book should include properly labelled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

---

* The work in these sciences must include certified note-books exhibiting the results of experimental work performed by the student. In physics forty exercises are required and in chemistry fifty exercises. These note-books should be presented at the examination. In the case of students certified in the sciences, the principal is expected to pass upon the quality of the note-books rather than send them to the University.

ORGANIZATION OF THE UNIVERSITY

The University is divided for purposes of administration into the Colleges of Agriculture, Arts and Sciences, Law, and Technology, and the Maine Agricultural Experiment Station. The policies of the University as a unit are determined by the Board of Trustees and the General Faculty, but each division regulates those affairs which concern itself alone.

College of Agriculture

Curricula in **Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, Poultry Husbandry,** and **for Teachers of Agriculture**

Two Years Course in Home Economics for Teachers; School Course in Agriculture (two years)

Short Courses; Farmers' Week; Correspondence and Lecture Courses; Demonstration Work

College of Arts and Sciences

Major subjects may be selected in **Biology, Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archaeology, History, Latin, Mathematics and Astronomy, Philosophy, Physics,** and **Romance Languages**

College of Law

This College is located in Bangor

College of Technology

Curricula in **Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, Mechanical Engineering,** and **Pharmacy,** and **Two Years Curriculum in Pharmacy**

MAINE AGRICULTURAL EXPERIMENT STATION

Offices and principal laboratories in Orono; Highmoor Farm in Monmouth; Aroostook Farm at Presque Isle

---

GRADUATE COURSES leading to the Master's degree are offered by various departments

SUMMER TERM of six weeks.

GENERAL STATEMENT

The college year, except for the College of Law, is divided equally into a fall semester and a spring semester. Five recitation hours a week of successful work for one semester entitle a student to one credit. The minimum regular work for a semester in the College of Arts and Sciences is fourteen hours a week (exclusive of physical training and military science) leading to two and four-fifths credits. In the College of Agriculture and the College of Technology the minimum is seventeen hours a week (exclusive of physical training and military science), leading to three and two-fifths credits. Six credits in the major subject represent the minimum requirement for a degree. In making up the quota of studies, laboratory work not requiring preparation counts as half time, unless otherwise specified. Such subjects are marked with a star (*) or dagger (†) in the detailed description of courses of instruction.

COLLEGE OF AGRICULTURE

FACULTY OF INSTRUCTION

LEON STEPHEN MERRILL, M. D.
Director of Agricultural Extension Service
DEAN
LUCIUS HERBERT MERRILL, Sc. D.
Professor of Biological and Agricultural Chemistry
FREMONT LINCOLN RUSSELL, B. S., V. S.
Professor of Bacteriology and Veterinary Science
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*
JOHN MANVERS BRISCOE, M. F. *Professor of Forestry*
GEORGE EDWARD SIMMONS, M. S. *Professor of Agronomy*
LAMERT SEYMOUR CORBETT, M. S.
Professor of Animal Industry
BLISS S BROWN, M. S. *Professor of Horticulture*
EDSON FORBES HITCHINGS, C. E., M. S.
Associate Professor of Horticulture
FRANCES ROWLAND FREEMAN, B. S.
Associate Professor of Home Economics
ALICE MIDDLETON BORING, PH. D.
Assistant Professor of Zoölogy
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
RALPH WOODBURY REDMAN, B. S.
Assistant Director of Agricultural Extension Service
HAROLD SCOTT OSLER, B. S. *Assistant Professor of Agronomy*
HARRY WOODBURY SMITH, B. S. *Instructor in Bacteriology*
HENRY ROBBINS BARROWS, M. S. *Instructor in Biology*
DOROTHEA BEACH *Instructor in Home Economics*

ERIC NICHOLS BOLAND, M. S. *Instructor in Animal Industry*
CARLETON WHIDDEN EATON, A. B., M. F.
Instructor in Forestry
ORVILLE ALVIN JAMISON, B. S. in Agr.
Instructor in Animal Industry
EARL JONES, M. S. *Instructor in Agronomy*
LILIAN NANCY RANDALL *Instructor in Home Economics*
MARION WILHELMINA BORDEN, B. S.
Instructor in Home Economics
ALEXANDER LURIE, B. S. *Instructor in Horticulture*
SIDNEY WINFIELD PATTERSON, B. S.
Instructor in Biological and Agricultural Chemistry
GLEN BLAINE RAMSEY, A. B. *Instructor in Biology*
NEIL CARPENTER SHERWOOD, B. S.
Instructor in Animal Industry
LAWRENCE VIVIAN JONES, LL. B. *Lecturer on Forestry Law*
CLARENCE WALLACE BARBER, M. S.
Director of Farm Demonstrations, Cumberland County
CLARENCE ALBERT DAY
Director of Farm Demonstrations, Washington County
ARTHUR LOWELL DEERING, B. S.
Director of Farm Demonstrations, Kennebec County
MAURICE DANIEL JONES, B. S.
Director of Farm Demonstrations, Penobscot County
WILSON MONTGOMERY MORSE, B. S.
Director of Farm Demonstrations, Franklin County
HAROLD HARLAN NASH
Director of Farm Demonstrations, York County
HAROLD JOSEPH SHAW
Director of Farm Demonstrations, Sagadahoc County
GEORGE NEWTON WORDEN, B. S.
Director of Farm Demonstrations, Hancock County
GEORGE ALBERT YEATON
Director of Farm Demonstrations, Oxford County
RALPH PIKE MITCHELL
In Charge of Boys' Agriculture Club Work
MARIE WILHELMINA GURDY, B. S.
In Charge of Girls' Agriculture Club Work
WILLIAM COLLINS MONOHAN, B. S.
In Charge of Poultry Extension Work

WOODBURY FREEMAN PRIDE, B. S. *Assistant in Biology*
PAUL WHEELER MONOHON, B. S.
Assistant in Extension Work and Physical Training

GENERAL INFORMATION

The College of Agriculture comprises the departments of Agricultural Extension, Agronomy, Animal Industry, Biological and Agricultural Chemistry, Biology, Farm Management and Agricultural Engineering, Forestry, Home Economics, Horticulture, Veterinary Science and Bacteriology. The aim of this college is to train young men for service as farmers, teachers of agriculture and the allied sciences in schools and colleges, investigators in agricultural experiment stations, and foresters; and to prepare young women to become teachers of home economics and to comprehend the problems of administration in the home and in public institutions. On entering either a four years curriculum or the two years School Course in Agriculture a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the faculty of the college.

The College of Agriculture has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent divided between two or three years.
2. Mathematics, the equivalent of one-half year, five hours a week.
3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.
4. Language (French or German), the equivalent of one-half year, five hours a week.
5. Military Science and Tactics, two years, three hours a week.
6. Physical Training, one year, three hours a week.

The courses of instruction are organized as follows:

1. Regular Curricula

   The four years general curricula in Agronomy, Animal Husbandry, Biology, Dairy Husbandry, Forestry, Home Economics, Horticulture, and Poultry Husbandry, and the four years curriculum for Teachers in General Agriculture

2. Short Courses
   - The two years Teachers' Course in Home Economics
   - The two years School Course in Agriculture
   - The short winter courses in General Agriculture, Dairying, Horticulture, and Poultry Management
   - Farmers' week

3. Extension Courses
   - The correspondence courses
   - The lecture courses
   - The traveling schools
   - The demonstration work
   - The coöperative experiments

THE COLLEGE CURRICULA

The college curricula are designed for those who wish to follow general farming, animal husbandry, dairy husbandry, poultry husbandry, horticulture, home economics, chemistry as related to experiment station work, biological chemistry, bacteriology and veterinary science, biology, farm management, and forestry either as a business or as a profession.

Certain studies are fundamental to all work in agricultural lines. As many as possible of these subjects are offered in the first two years, during which the student is necessarily given no choice of subjects. By the beginning of the junior year each student must decide whether he is to specialize in Agronomy, Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Horticulture, or Biology. To specialize in any one of these lines, he must during his junior and senior years take the studies given in the schedules which follow.

Students in agriculture who contemplate entering experiment station work should elect the course offered by the department of agricultural chemistry covering the qualitative and quantitative chemical analysis of fodders, fertilizers, and dairy products. They should also elect a preparatory course in quantitative chemical analysis.

One of the following curricula, embracing 150 college hours each, is required for the students taking the four years curricula in agriculture. The elective subjects are selected with the advice of the major instructor.

Curriculum for the First Two Years for All Students Taking Four Years Curricula in Agriculture

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 11, †4	2	Animal Industry 2	2
Biology 1, 2 †4	4	Animal Industry 4, †2	1
Chemistry 1 or 3	2	Biology 2, 2 †4	4
Chemistry 5, †4	2	Chemistry 2 or 4	3
Drawing 9, *3	1	Chemistry 6, †4	2
English 3	1	Drawing 10, *3	1
English 7	2	English 4	1
Military 1, *3	1	English 8	2
Modern Language	2	Military 2, *3	1
Physical Training *2	½	Modern Language	2
	18½	Physical Training *2	1
			20

SOPHOMORE YEAR

Agronomy 1, 2, *3	3	Agronomy 12, 2, †2	3
Animal Industry 3	2	Biological Chemistry 8, 3, †4	5
Animal Industry 5, †2	1	Biology 8, 2 †4	4
Biology 3	2	Horticulture 2, 2 *3	3
Biological Chemistry 7	2	Mathematics 12	2
Chemistry 15, 2 †2	3	Military 2, *3	1
Mathematics 11	3	Poultry Husbandry 2, 1 †2	2
Military 1, *3	1		20
Poultry Husbandry 1, 2, †2	3		
	2		

Curriculum for Students Specializing in Agronomy

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 13, 1 †2	2	Agricultural Chemistry 6	2
Animal Industry 7, 2 *4	4	Agronomy 14, 1 †2	2
Bacteriology 1, †6	3	Agronomy 16, 1 †2	2
Biology 9, 2 †6	5	Agronomy 18	2
English 17	2	Animal Industry 6	2
Elective	2	Biology 10, 2 †6	5
	18	English 18	2
		Elective	2
			19

SENIOR YEAR

Agronomy 3	2	Farm Management 2, †4	2
Agronomy 15, 1 †2	2	Farm Management 72, 2 *3	3
Farm Management 71, 2 *3	3	Farm Management 74, 2 *3	3
Thesis	3	Thesis	3
Elective	8	Elective	6
	18		17

Curriculum for Students Specializing in Animal Industry

Animal Husbandry

JUNIOR YEAR

Subject	Hours	Subject	Hours
Animal Industry 7, 2 *4	4	Agricultural Chemistry 6	2
Bacteriology 1, †6	3	Animal Industry 6	2
Bacteriology 3	2	Animal Industry 52, †2	1
Biology 51, 2 †4	4	Bacteriology 52, †6	3
English 17	2	Biology 52, 2 †4	4
Farm Management 71, 2 *3	3	English 18	2
	18	Veterinary Science 14	3
		Veterinary Science 16	1
			18

SENIOR YEAR

Spring Semester		*Fall Semester*	
Subject	Hours	Subject	Hours
Agronomy 3	2	Animal Industry 54	2
Animal Industry 53	2	Farm Management 2, †4	2
Veterinary Science 15	2	Farm Management 72, 2 *3	3
Veterinary Science 17	1	Thesis	3
Veterinary Science 19	2	Elective	8
Thesis	3		18
Elective	6		
	18		

Dairy Husbandry

JUNIOR YEAR

Animal Industry 7, 2 *4	4	Agricultural Chemistry 6	2
Bacteriology 1, †6	3	Animal Industry 6	2
Bacteriology 3	2	Animal Industry 8, 1 *3	2
English 17	2	Bacteriology 52, †6	3
Farm Management 71, 2 *3	3	English 18	2
Elective	4	Veterinary Science 14	3
	18	Veterinary Science 16	1
		Elective	4
			19

SENIOR YEAR

Agronomy 3	2	Bacteriology 102, †4	2
Animal Industry 9, 2 *6	4	Farm Management 2, †4	2
Animal Industry 51	3	Farm Management 72, 2 *3	3
Veterinary Science 15	2	Thesis	3
Veterinary Science 17	1	Elective	7
Thesis	3		17
Elective	3		
	18		

Poultry Husbandry

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Animal Industry 7, 2 *4	4	Agricultural Chemistry 6	2
Bacteriology 1, †6	3	Animal Industry 6	2
Bacteriology 3	2	Biology 52, 2 †4	4
Biology 51, 2 †4	4	English 18	2
English 17	2	Poultry Husbandry 4, 1 †2	2
Poultry Husbandry 3, 1 †2	2	Elective	6
Elective	2		18
	19		

SENIOR YEAR

Agronomy 3	2	Farm Management 2, †4	2
Farm Management 71, 2 *3	3	Farm Management 72, 2 *3	3
Poultry Husbandry 5	2	Poultry Husbandry 6, 3 †2	4
Poultry Husbandry 7, 2 †2	3	Veterinary Science 12	2
Thesis	3	Thesis	3
Elective	5	Elective	3
	18		17

Curriculum for Students Specializing in Horticulture

JUNIOR YEAR

Bacteriology 1, †6	3	Agricultural Chemistry 6	2
Biology 9, 2 †6	5	Animal Industry 6	2
English 17	2	Biology 10, 2 †6	5
Horticulture 1, 2 †2	3	English 18	2
Horticulture 7, 2 †2	3	Horticulture 4, 2 †2	3
Elective	2	Horticulture 10	2
	18	Elective	2
			18

SENIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 3	2	Farm Management 2, †4	2
Farm Management 71, 2 *3	3	Horticulture 6, 2 †2	3
Horticulture 3, 2 †2	3	Horticulture 8, 2 †2	3
Horticulture 5, 2 †2	3	Horticulture 52 (Seminar)	1
Horticulture 51 (Seminar)	1	Horticulture 12 (Thesis)	3
Horticulture 11 (Thesis)	3	Elective	6
Elective	3		18
	18		

Curriculum for Students Taking Major Work in Biology

JUNIOR YEAR

Bacteriology 3	2	Bacteriology 2	3
English 17	2	English 18	2
Geology 5	3	Modern Language	2
Modern Language	3	Plant Pathology 66 or Elective	3
Plant Histology 61 or Vertebrate Anatomy 51	4	Plant Physiology 62 or Animal Embryology 52	4
Elective	3	Elective	4
	17		18

SENIOR YEAR

Animal Histology 53 or Animal Physiology 55 or Advanced Botany 77	4	Animal Embryology 52 or Plant Physiology 62	4
Biology Seminar 71	1	Biology Seminar 72	1
Thesis 73	3	Plant Pathology 66 or Advanced Botany 78 or Elective	3
Vertebrate Anatomy 51 or Plant Histology 61	4	Thesis 74	3
Elective	6½	Elective	7
	18½		18

Curriculum in Agriculture for Those Who Intend to Become Teachers of this Subject in the Public Schools

This curriculum is offered in response to a call for men capable of teaching all branches of elementary agriculture in high schools or academies. In order to receive a degree, 150 college hours, or 30 credits, must be completed.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 11, †4	2	Animal Industry 2	2
Biology 1	4	Animal Industry 4, †2	1
Chemistry 1 or 3	2	Biology 2	4
Chemistry 5, †4	2	Chemistry 2 or 4	3
Drawing 9, *3	1	Chemistry 6, †4	2
English 7	2	Drawing 10, *3	1
English 3	1	English 8	2
Military 1, *3	1	English 4	1
Modern Language	3	Military 2, *3	1
Physical Training *2	½	Modern Language	2
		Physical Training 2	1
	18½		20

SOPHOMORE YEAR

Subject	Hours	Subject	Hours
Animal Industry 3	2	Education 52	3
Animal Industry 5, †2	1	Horticulture 2	3
Education 51	3	Mathematics 2	3
Horticulture 1	3	Mathematics 4	2
Mathematics 1	3	Mech. Engineering 6, *4	1
Mathematics 3	2	Military 2, *3	1
Mech. Engineering 3, *4	1½	Poultry Husbandry 2, 1 †2	2
Military 1, *3	1	Electives	3
Poultry Husbandry 1, 2, †2	3		18
	19½		

JUNIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Agronomy 1, 2 *3	3	Agronomy 14, 1 †2	2
Education 55	3	Biology 64	3
English 17	2	Chemistry 16	5
Geology 5	3	English 18	2
Horticulture 3	3	Modern Language	2
Modern Language	3	Veterinary Science 14	3
		Veterinary Science 16	1
	17	Elective	1
			19

SENIOR YEAR

Agronomy 3	2	Animal Industry 6	2
Animal Industry 7	4	Animal Industry 8, 1 *3	2
Bacteriology 1, †6	3	Agricultural Chemistry 6	2
Biological Chemistry 1	5	Biology 8	4
Physics 5	5	Horticulture 4, 2 †2	3
Veterinary Science 15	2	Physics 4, *5	2
Veterinary Science 17	1	Electives	2
	22		17

The Forestry Curriculum

A complete undergraduate curriculum is arranged which will serve as the basis not only for practical work in forestry, but also for a liberal education. During the first two years much attention is given to biology and civil engineering, both of which are important fundamental subjects upon which are built the more technical forestry courses. A knowledge of the principles of forestry in its different branches is gained by the student, and considerable practical work is done in the forest. The woodlands belonging to the University, together with adjacent lands covered by young forest, furnish a field for the study of many forest problems. Field trips are made and demonstration thinnings and plantings made at various places throughout the State.

The instruction in this department consists of lectures, recitations, laboratory, and field work; the latter consumes a considerable portion of the scheduled time during the junior and senior years.

There are good openings for students to obtain work in the Maine woods during the summer vacations, and many take advantage of the opportunity to get practical experience, and at the same time aid in defraying their university expenses.

Besides the prescribed work in other departments courses 4 to 22 inclusive, are required of all students majoring in forestry, and courses 3 and 13 are recommended as electives for these students. Course 2 is open to all students, but is not required of students majoring in forestry.

At graduation the student receives the degree of Bachelor of Science in Forestry. A special bulletin, giving detailed description of all the courses as well as of the equipment, is issued by the department and will be sent free to any address upon request.

Curriculum in Forestry

FRESHMAN YEAR

Biology 1, 2 †4	4	Biology 2, 2 †4	4
Chemistry 1 or 3	2	Chemistry 2 or 4	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 7	2	English 8	2
Mathematics 1	3	Mathematics 2	3
Mathematics 3	2	Mathematics 4	2
Military 1, *3	1	Military 2, *3	1
Physical Training	½	Physical Training	1
	18½		20

SOPHOMORE YEAR

Agronomy 1, 2 *3	3	Biology 8, 2 †4	4
Biology 67, 2 †4	4	Biology 68, 2 †4	4
Civil Engineering 1	1½	Civil Engineering 2	1
Civil Engineering 5	1	Civil Engineering 4	1
English 3	1	English 4	1
English 9	2	English 10	2
History 5	3	Horticulture 2, 2 *3	3
Military 1, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
	19½		19

JUNIOR YEAR

Biology 61, 2, †4	4	Biology 62 or 66	4 or 3
Civil Engineering 21	1	Civil Engineering 22	1
Civil Engineering 23	1	Civil Engineering 24	2
Civil Engineering 27	1	Forestry 6	2
Geology 5	3	Forestry 8, *6	2
Forestry 11	2	Forestry 10, *3	1
Forestry 13, *6	2	Modern Language	2
Horticulture 5, 2, †2	3	Physics 6	2
Modern Language	3	Electives	2
	20		18 or 17

SENIOR YEAR

Biology 3	2	Biology 66 or 62	3 or 4
Forestry 1	2	Forestry 12	2
Forestry 3	1	Forestry 14, *6	2
Forestry 5	1	Forestry 16	2
Forestry 9	1	Forestry 18	2
Forestry 15	2	Forestry 20	2
Forestry 17, *6	2	Forestry 22	2
Forestry 19	1	Forestry 26 (Thesis)	3
Forestry 21	3		
Forestry 25 (Thesis)	2		18 or 19
	17		

Four Years Curriculum in Home Economics

This curriculum, leading to a Bachelor of Science degree, prepares women to teach home economics in elementary, high and normal schools, and in colleges. It gives instruction in cookery, dietetics, marketing, serving, household economics, laundering, sewing, and handwork. A foundation for the practical work is laid in prusuing a thorough course in biology, chemistry, and physics. Practice teaching and normal methods are based upon a study of psychology and the history of education.

Those desiring admission to this curriculum must meet the regular college requirements.

Laboratory fees, to cover the cost of materials used, are as follows: Cookery courses 1, 2, 5, 6, 7, 8, each $6 a semester. Cookery courses 3, 4, each $2.50 a semester. Handwork courses $1 a semester. Household

economics 50c. a semester. Laundering $1 a semester. Practical housework $3.50 a semester. Camp cookery $2.00 a semester.

Students expecting to major in Home Economics should write to the head of the department in regard to equipment.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1, 2 †4	4	Biology 2, 2 †4	4
Chemistry 1 or 3	2	Chemistry 2 or 4	3
Chemistry 5, †4	2	Chemistry 6, †4	2
English 7	2	English 8	2
Home Economics 1, 2 †4	4	Home Economics 2, 2 †4	4
Modern Language	3	Modern Language	2
	17		17

SOPHOMORE YEAR

Bacteriology 3	2	Chemistry 16, 3 †4	5
English 5	1	English 4	1
English 9	2	English 10	2
Home Economics 9, †4	2	Home Economics 10, †4	2
Home Economics 13, †4	2	Home Economics 14, †4	2
Home Economics 15, 1 †3	2½	Home Economics 16, 1 †3	2½
Mathematics 1	3	Home Economics 20, 1 †2	2
Mathematics 3	2	Modern Language	2
Modern Language	3		
	19½		18½

JUNIOR YEAR

Biological Chemistry 1	5	Biology 16	2
Home Economics 3, 2, †2	3	Biological Chemistry 2, †4	2
Home Economics 17, 1, †2	2	Home Economics 4, 2, †2	3
Home Economics 19, 1, †1	1½	Home Economics 18, 1, †2	2
Philosophy 51	3	Philosophy 52	3
Physics 5	5	Physics 4	2
		Elective	4
	19½		18

SENIOR YEAR

Economics 1b	2	Education 52	3
Education 51	3	Home Economics 6	1½
Education 55	3	Home Economics 12, †4	2
Home Economics 5, 1, †3	2½	Home Economics 22	1
Home Economics 11, †4	2	Home Economics 24	2
Home Economics 21	2	Home Economics 26	1
Home Economics 23	1	Home Economics 28	3
Horticulture 5, 2, †2	3	Philosophy 54	2
Mechanical Engineering 15	1	Philosophy 56	2
		Elective	4
	19½		21½

Two Years Course in Home Economics

This course aims to prepare women for teaching Home Economics in secondary schools. It is offered to those who find it impossible to remain at the University for a longer period. This course does not lead to a degree, but a certificate is granted when the prescribed course has been satisfactorily completed. Women who are graduates of a recognized high school or its equivalent, and who have some practical knowledge of housework, are admitted to this course without examination. It is desirable that a student should have taken, previous to her entering the University, courses in elementary chemistry, physics, and physiology. For information concerning fees, see the four years curriculum.

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Biology 1, 2 †4	4	Biology 2, 2 †4	4
Chemistry 1 or 3	2	Chemistry 2 or 4	3
Chemistry 5, †4	2	Chemistry 6, †4	2
English 7	2	English 8	2
Home Economics 1, 2 †4	4	Home Economics 2, 2 †4	4
Home Economics 9, †4	2	Home Economics 10, †4	2
Home Economics 15, 1 †3	2½	Home Economics 16, 1 †3	2½
	18½		19½

SECOND YEAR

Education 51	3	Biology 4	2
Home Economics 7, 1 †4	3	Education 52	3
Home Economics 13, †4	2	Home Economics 6, †3	1½
Home Economics 17, 1 †2	2	Home Economics 8, 1 †4	3
Home Economics 19, 1 †1	1½	Home Economics 14, †4	2
Home Economics 21	2	Home Economics 18, 1 †2	2
Home Economics 23	1	Home Economics 20, 1 †2	2
Household Chemistry 9, 3 †4	5	Home Economics 22	1
Mechanical Engineering 15	1	Home Economics 24	2
	20½		18½

Special Courses in Agriculture and Home Economics

The Special Courses in Agriculture and Home Economics are designed for young men and women who cannot well spend four years in preparation, but who desire to secure special training in this line. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, dairying, poultry management, veterinary science, agricultural chemistry, bacteriology, farm management, general agriculture, or home economics.

Persons not candidates for a degree, who wish to take special studies, may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to take the desired studies. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course. If they subsequently desire to become candidates for a degree, they will be required to meet all the entrance requirements.

The annual expenses for courses of one year or more are the same as those for students in the four years curricula. Tuition is free except in Forestry.

Two Years School Course in Agriculture

This is a course designed to train young men and women who wish to become practical farmers, farm superintendents, dairymen, poultrymen or gardeners, but who cannot devote time to high school or college training.

The same equipment is used as in the four years curricula, but the work is of a more elementary nature. All the classes are separate and distinct from the four years classes, and in no case will college credit be allowed for work done in the School Course.

There are no entrance examinations required of those who desire to enter the School Course. Students over fifteen years of age who are prepared for advanced grammar or high school work are eligible for registration. No tuition is charged in this course, but the same registration and incidental fees of fifteen dollars a semester, or thirty dollars a year, are charged school course students in agriculture as are charged all others attending the University. Fees amounting to two dollars and fifty cents are charged in each of the carpentry and blacksmithing courses to cover cost of material used. Fees are also charged in several agricultural laboratories.

The practical side of the work in this course is strongly emphasized, and since students are expected to be able to do work and handle men when they have finished, those taking this course are required to spend the summer vacation between the first and second years in work either at the college or on some farm approved by the Faculty.

On completion of the course a certificate is awarded those who have satisfactorily done the work.

The following is a schedule of the work given:

FIRST YEAR

Fall Semester		*Spring Semester*	
Animal Husbandry	3	Dairy Husbandry	3
Animal Husbandry Laboratory †	2	Dairy Husbandry Laboratory.. *	3
Business Arithmetic and Farm Accounts	2	English	3
Carpentry *	3	Farm Botany	2
English	3	Forge Work *	3
Farm Crops	3	Fruit Growing	3
Farm Crops Laboratory *	3	Orchard Practice and Laboratory Work *	3
Fruit Handling	3	Poultry Husbandry	2
Fruit Picking, Packing, and Laboratory Work *	3	Poultry Husbandry Laboratory †	2
Poultry Husbandry	2	Soils and Fertilizers	3
Poultry Husbandry Laboratory †	2	Soils Laboratory *	3

SECOND YEAR

Animal Husbandry	3	Animal Husbandry	3
Animal Husbandry Laboratory †	2	Animal Husbandry Laboratory †	2
English	2	English	2
Farm Chemistry	3	Farm Management	3
Farm Crops	2	Farm Management Laboratory *	3
Farm Engineering and Mechanics	1	Forestry	2
Farm Engineering and Mechanics Laboratory *	3	Insects	2
Poultry Husbandry	2	Poultry Husbandry	2
Vegetable Gardening	3	Small Fruit Culture and Plant Propagation	3
Vegetable Gardening Laboratory *	3	Small Fruit Culture and Plant Propagation Laboratory *	3
Veterinary Science	3	Veterinary Science	3

Short Courses in General Agriculture, Dairying, Horticulture, and Poultry Management

The short course in general agriculture deals especially with farm crops. Special attention is given to the potato, corn, oat, and hay crops,—the preparation of the seed bed, selection of seed, seeding, fertilization, culture, and harvesting. Such general subjects as drainage, maintenance of soil fertility, rotation of crops, control of weeds, etc., are considered. Potato, corn, and small grain judging is made a prominent feature.

The short course in dairying begins on the Tuesday following the Christmas recess and continues for four weeks. It is designed to meet the requirements of creamery assistants, practical farmers, herdsmen, and others who desire to learn milk testing, butter making, the principles of animal nutrition, and practices of feeding, breeding, judging stock, and the diseases of farm animals.

The short course in horticulture is offered for those who wish to acquaint themselves with the most approved methods of orchard management. Special attention will be given to such subjects as the selection of orchard sites, selecting and obtaining nursery stock, pruning, cultivation, spraying, packing, and coöperation in the fruit business. Opportunity will be given for the laboratory study of spraying, packing, planting, pruning, and grafting. An effort is made to show where money is lost and made in the fruit business.

The short course in poultry management is given each year to aid persons who wish to gain a practical knowledge of the handling of incubators and brooders, the feeding and rearing of young chicks, the general management of mature fowls, scoring, judging, killing, and marketing. Supplementing the work of the regular instructors, some of the best known poultrymen in the country are engaged to give lectures and demonstrations along special lines. For purposes of instruction the College of Agriculture keeps representatives of the leading breeds of fowls.

Very few text-books are used in any of the courses and the expenses for board and room, which are the only other expenses, are moderate. Circulars giving the dates and programs of these courses are published each year and will be sent upon application to the College of Agriculture.

Farmers' Week

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farmers' Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discused, one or more sessions are given up to problems of rural betterment. A section is arranged where home economics for farmers' wives is taught. Dates and programs may be secured each year by addressing the College of Agriculture.

Department of Agricultural Extension

This department of the College of Agriculture offers correspondence courses, lecture courses, demonstration work, coöperative experiments, and extension schools in agriculture.

This work is intended to give direct help to those on the farm and in the home; to aid those who desire definite instruction in practical agriculture, animal and dairy husbandry, poultry husbandry, home economics, forestry, and horticulture. It supplements the teaching and experimenting of the College of Agriculture and the Experiment Station. It is professedly a popular work, because it endeavors to aid the farmer to solve the practical problems of the farm, to quicken agricultural work, and to inspire greater interest in country life.

Correspondence Courses

These courses are given by means of text-books and free publications, either furnished by the college or produced from the U. S. Department of Agriculture, or from the various experiment stations. The text-books are furnished at publishers' prices. The courses are free and may be taken by individuals, granges, reading circles, or other organizations. A certificate will be given to students completing any of these courses with satisfactory standing.

The following courses are offered:

Course 1—Farm Crops and Crop Production
Course 2—Farm Management
Course 3—Feeding and Breeding of Farm Animals and Dairying
Course 4—Poultry Keeping
Course 5—Fruit Growing
Course 7—Elementary Agriculture
Course 8—Home Economics
Course 9—Vegetable Gardening
Course 10—The Business of Dairying

Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Demonstration Work

For this work members of the agricultural faculty will make demonstrations, showing, as well as telling, how to solve many practical farm problems. These demonstrations are made on the farms and are offered under the same conditions as the lectures.

The following is a partial list of the demonstrations that may be secured: home mixing of fertilizers; milk testing (use of Babcock tester); stock judging; corn and small grain judging and breeding; potato judging, breeding, and spraying; orchard spraying, pruning, and grafting; apple packing; method of killing and dressing poultry; method of determining the age of horses; methods of giving medicine to domestic animals. All demonstrations are accompanied by lectures.

Farm Demontration Work

This form of extension service consists of practical demonstration of farming operations, of the values of various projects, and of proper equipment in the farming business.

The demonstration work is now established in nine counties with every prospect of spreading to the remaining counties in the State within a few years.

Boys' and Girls' Agricultural Clubs

The organization of junior agricultural clubs was begun in 1913, under the direction of the Extension Department with a State Leader in active charge of the field work. The club work is conducted very largely in coöperation with the schools, granges, and the Y. M. C. A. county work. It will be extended throughout the state as rapidly as possible. Local exhibits will be held the present year and the winners at these exhibits will compete later in a State contest to be held at the College of Agriculture.

Cooperative Experiments

Experiments will be undertaken in coöperation with farmers along such lines at the following: the determination of fertilizing problems; the eradication of noxious weeds; the determination of the best means for increasing the hay crop. To encourage systematic seed improvement the college will each year distribute a large amount of improved seeds of various kinds among such farmers of the State as will undertake to carry on careful experiments and to make reports of the results obtained at the close of each season.

Experiments with corn, oats, alfalfa, fertilizers, and pastures have been carried on in nearly every county in the State.

During Farmers' Week exhibits are made showing the results of this experimental work. School gardening is encouraged by the distribution of seeds.

Extension Schools in Agriculture

To extend the advantages of agricultural instruction to persons actively engaged in agriculture, the Extension department will conduct a limited number of Three Day Schools in various parts of the State. Members of the agricultural faculty will teach in these schools.

Correspondence

Besides the Demonstration, Correspondence, and Lecture courses, the College of Agriculture welcomes correspondence on practical farm topics. If information is desired along lines relating to crops, fertilizers, dairy work, feeding, or orcharding and gardening, the various instructors are ready to give such assistance as they are able.

A free monthly publication, "Timely Helps for Farmers," treating of subjects of interest to farmers, is published by the Extension department and may be secured upon application.

Circulars giving full information upon these subjects will be sent upon request.

DEPARTMENTS OF INSTRUCTION

NOTE—A star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours work give credit for one hour. This system pre-supposes that one hour of recitation work requires an average of two hours preparation. *Courses having an odd number are given in the fall semester and those having an even number in the spring semester.*

AGRONOMY

PROFESSOR SIMMONS; ASSISTANT PROFESSOR OSLER; MR. E. JONES

Soils

For undergraduates only

1. SOILS.—Lectures and recitations on the origin, types, physical properties, moisture content, and distribution of soils, and their relation to crop production. The fundamental principles underlying soil management for soil conservation and improvement will be studied. Class room, *two hours a week;* laboratory, **three hours a week.*

3. SOIL FERTILITY.—This course deals with stable manures, green manures, commercial fertilizers, and soil amendments; also a study of soil organisms as affecting the plant food in the soil. *Two hours a week.*

For graduates and undergraduates

52. SOIL SURVEYING AND MAPPING.—A study is made of soil types, the principles of correlation and methods of soil surveying and mapping. Class room, *two hours a week;* laboratory, **three hours a week.*

54. Soil Fertility.—Soil Improvement Investigation. A review of the experimental work in this country and abroad. The application of these results to soil improvement and crop production problems. Prerequisites Agronomy 1 and 3. *Two hours a week.*

Crops

For undergraduates only

11. Field Crops.—A laboratory course in seed and grain identification, improvement by grading, testing, selecting, and preparing seed for planting. A collection of weeds and their seeds will be required. †*Four hours a week.*

12. Field Crops.—A general course including a study of the most important cereals, grass, forage, and root crops, their adaptation to systems of rotation, culture and uses, with special reference to New England conditions. Class room, *two hours a week;* laboratory, †*two hours a week.*

13. Field Crops.—Judging and Commercial Grading.—Comparative judging of corn, small grains, and potatoes, according to standards. A study of market grade requirements. Class room, *one hour a week.* laboratory, †*two hours a week.*

14. Field Crops.—Corn.—A course dealing with the production of corn and the care and marketing of the crop. Types and varieties of both field and sweet corn will be considered in this course. Class room, *one hours a week;* laboratory, †*two hours a week.*

15. Field Crops.—Roots and Tubers.—A course dealing with the production, storage, and marketing of roots and tubers. Class room, *one hour a week;* laboratory, †*two hours a week.*

16. Field Crops.—Grasses and Forage Crops.—Lecures and laboratory work dealing with the grasses and forage plants. A study of the hay crop and markets; soiling systems, and their adaptation to local conditions. Class room *one hour a week;* laboratory, †*two hours a week.*

18. Field Crops.—Crop Improvement.—A study of the principles and methods involved in field crop improvement. The work of experiment stations in this country and abroad is reviewed. Prerequisites, Agronomy 11 and 12. *Two hours a week.*

For graduates and undergraduates

62. Systematic Field Crops.—A course designed for advanced or graduate students preparing for experimetnal work, teaching, or plant breeding. Students will be expected to grow and collect material under the supervision of the department during the summer months. Prerequisite, adequate training in botany and field crops. Time must be arranged with the instructor not later than the middle of the junior year. *Two or more hours a week.*

63. Systematic Field Crops.—A continuation of Agronomy 62. *Two or more hours a week.*

65. Seminar.—A study of recent literature, problems, and experiments pertaining to Agronomy and Farm Management. *One hour a week.*

66. Seminar.—A continuation of Agronomy 65. *One hour a week.*

67. Thesis.—Students majoring in Agronomy will be required to prepare a thesis under the direction of the head of the department. Choice may be had of subjects coming under the division of Farm Crops, Farm Management, or Soils. Choice of subject should be made and the work definitely planned before the close of the junior year. *Three hours a week.*

68. Thesis.—A continuation of Agronomy 67. *Three hours a week.*

ANIMAL INDUSTRY

Professor Corbett; Mr. Jamison; Mr. Boland; Mr. Sherwood; Mr. Boland

Animal and Dairy Husbandry

For undergraduates only

2. Types and Breeds of Farm Animals.—A study of the types and breeds of farm animals. A course covering the history, development, and characteristics of farm animals. *Two hours a week.*

3. Care, Feed, and Management of Live Stock.—A course dealing with the selectnion, breeding, growing, and maintenance of horses, cattle, sheep and swine. Prerequisites, Animal Industry 2 and 4. *Two hours a week.*

4. Live Stock Judging.—This course is designed to acquaint the students with the types and breed characteristics of farm animals, by use of the score card, comparative judging, and the selection of breeding stock. To be taken in connection with Animal Industry 2. †*Two hours a week.*

5. Live Stock Judging.—A continuation of Animal Industry 4. †*Two hours a week.*

6. Live Stock Feeding.—A study of the general principles of nutrition as applied to live stock, composition of feed stuffs, comparison and use of feeding standards, calculating rations, methods of feeding for economic production. Prerequisites, Animal Industry 3, Biological Chemistry 7 and 8. *Two hours a week.*

7. General Dairying.—Given by lectures, assigned readings, recitations, and laboratory practice. Milk; its secretion, composition, properties pasteurization, separation; dairy practices in handling milk and cream, dairy equipment, use of common dairy machinery; preparation of starters; test of dairy products for fat (Babcock method), acidity, total solids, common adulterations, and preservatives. Class room, *two hours a week*; laboratory, †*four hours a week.*

8. Butter Making.—Practice in making starters, ripening cream, churning, and preparing butter for market. Each student is required to make starter and ripen at least four lots of cream. Prerequisite, Animal Industry 7. Class room, *one hour a week,* laboratory, **three hours a week.*

9. Cheese Making.—Lectures, recitations, and laboratory practice on the manufacture and curing of various types of cheese, including Cheddar and soft cheeses adapted to the New England trade. The laboratory work requires six consecutive hours. Prerequisite, Animal Industry 7. Class room, *two hours a week;* laboratory **six hours a week.*

For graduates and undergraduates

51. Dairy Technology.—A study of dairy products; dairy by-products; factory machinery and operations; certified milk; markets and marketing; educational work with dairymen. Given by lectures, recitations, assigned readings and round table conferences. Prerequisite, Animal Industry 7. *Three hours a week.*

52. Advanced Live Stock Judging and Management.—A laboratory course in which the individual student gets experience in handling live stock and preparation of stock for the show ring and market. As far as possible, visits will be made to live stock farms. †*Two hours a week.*

53. Advanced Live Stock Feeding and Management.—Nutrition and feeding experiments, as well as the methods and practices of the most successful feeders in the production of milk, meat, and the rearing of horses, are studied. *Two hours a week.*

54. Advanced Animal Breeding.—Principles and theories of breeding as applied to the live stock industry; study of pedigrees and records by the use of the different herd books; an economic study of the generative systems of domestic animals. Prerequisites, Animal Industry 3, and Veterinary Science 6. *Two hours a week.*

55. Thesis.—Students specializing in Animal Industry are required to prepare a thesis on some subject approved by he head of the department. *Three hours a week.*

56. Thesis.—A continuation of Animal Industry 55. *Three hours a week.*

Poultry Husbandry

For undergraduates only

1. Types, Breeds, and Management of Poultry.—This course takes up the origin, history, and development of the types, breeds, and varieties of fowl, ducks, geese, and turkeys. A study of feeds and feeding, egg production, incubation and brooding, housing, and the general management of poultry on the farm. The laboratory work will consist of judging, killing, and dressing poultry, judging handling, grading, and packing eggs for market; a study of the anatomy of the digestive and

reproductive system of the fowl. Class room, *two hours a week;* laboratory, †*two hours a week.*

2. Types, Breeds, and Management of Poultry.—A continuation of Ph. 1. Class room, *one hour a week;* laboratory, †*two hours a week.*

3. Commercial Poultry Keeping.—This course deals with poultry keeping as a business, as an investment, as an employment; a consideration of the large poultry farms and how they are operated; the planning and laying out of poultry houses, plants, and fixtures suitable for specializing on a large scale. Prerequisites, Courses 1 and 2. Class room, *one hour a week;* laboratory, †*two hours a week.*

4. Poultry Management.—Care of Breeding Stock.—This course takes up the mating, housing, feeding, and handling of breeding stock, and the growing of pullets and cockerels for breeding purposes. Students will be assigned small pens of breeding stock for which they will care. Prerequisites Courses 1 and 2. Class room, *one hour a week;* laboratory, †*two hours a week.*

5. Poultry Literature.—This is an advanced course comprising the study of bulletins and reports of experiment stations of this and other countries. Attention will also be given to poultry papers and text books. Prerequisites Courses 1 and 2. Class room, *two hours a week.*

6. Incubation and Brooding.—This course consists of a study of natural and artificial incubation and brooding. The laboratory work deals with work immediately connected with the hatching and rearing of chicks. Prerequisites, Courses 1 and 2. Class room, *three hours a week;* laboratory, †*two hours a week.*

7. Breeds and Breeding.—Market and Fancy Poultry.—This course deals with the types and breeds of market and fancy poultry, their history, development and breed characteristics. A study of the principles of breeding and the application of the same to both fancy and utility poultry. Prerequisites, Courses 1, 2, and 4. Class room, *two hours a week;* laboratory, †*two hours a week.*

For graduates and undergraduates

51. Thesis.—Original work on some subject chosen by the student under the direction of the head of the department. *Three hours a week.*

52. Thesis.—A continuaion of Course 51. *Three hours a week.*

Bacteriology and Veterinary Science

Professor Russell; Mr. Smith

For undergraduates only

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and the study of the morphological and biological characteristics of typical bacteria. Some outside reading will be required. Required of students taking major work in Agriculture. †*Six hours a week.*

2. Bacteriology.—Similar to Bacteriology 1. Offered for students in the College of Technology and others who may elect it. †*Six hours a week.*

3. Bacteriology.—A lecture course open to all students. It should be elected by students taking Course 1 as well as by students not taking a laboratory course. Subjects considered will include the history of bacteriology; classification and biological characteristics of bacteria, bacteria in air, water, soil, and dairy products; the relation of bacteria to health and disease; immunity. *Two hours a week.*

12. Veterinary Science.—This course deals with the anatomy, physiology, and diseases of poultry. *Two hours a week.*

14. Veterinary Science.—A combined lecture and laboratory course dealing with the anatomy and physiology of our domestic animals, and their treatment to preserve and restore health. *Three hours a week.*

15. Veterinary Science.—A continuation of Veterinary Science 14. *Two hours a week.*

16. Veterinary Science.—A clinic open to all students studying veterinary science. *One hour a week.*

17.—Veterinary Science.—A continuation of Veterinary Science 16. *One hour a week.*

19. Veterinary Science.—Veterinary materia medica and pharmacy. *Two hours a week.*

For graduates and undergraduates

52. Bacteriology.—A laboratory course in which students will study bacteria of water, air, soil, and dairy products; or pathogenic bacteria. Prerequisites, Course 1 or 2. †*Six hours a week.*

Primarily for graduates

101-102. Bacteriology.—This is a laboratory course for students who desire to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work and the time will be arranged to suit individual students.

Biological and Agricultural Chemistry

Professor Merrill; Mr. Patterson

For undergraduates only

1. Biological Chemistry.—Lectures and recitations on the composition of the plant; the source, nature, and assimilation of plant food; the composition of the animal body and of food materials; the adaptation of food to the animal requirements; the chemical changes involved in the digestion and assimilation of foods; respiration; absorption and liberation of energy; general metabolism; the chemical processes and methods of investigation by which these subjects are studied. Prerequisite, Chemistry 6. *Five hours a week.*

2. Laboratory Biological Chemistry.—A study of the carbohydrates, fats, and protein bodies; the digestive enzymes; the blood, muscles, bones, and other tissues of the body; milk, bile, and other secretions. A continuation of the preceeding course. †*Four hours a week.*

3. Economic Geology.—A course in applied geology, including a general survey of our mineral resources, with special reference to the mineral fuels; the distribution and manner of occurrence of the more useful metals; the economically important non-metallic minerals; and a study of the rocks and their uses as building stone, as road material, and as sources of lime and cement. *Two hours a week.*

4. Agricultural Analysis.—A course in the qualitative and quantitative analysis of fodders, fertilizers, milk, butter, and other dairy products. The course is designed for students desiring to take up experi- 4), 5, 6, 11, 52, 53 and 60. †*Ten hours a week.*

5. Geology.—A study of the earth's history and development, with especial attention to dynamical, structural, and physiographical geology. *Three hours a week.*

6. Agricultural Chemistry.—This course includes a study of the origin and composition of soils; the source and composition of fertilizing materials; the fixation of atmospheric nitrogen; the composition of insecticides and fungicides; the chemistry of milk and other dairy products. Prerequisite, Biological Chemistry 1. *Two hours a week.*

7. Biological Chemistry.—Lectures and recitations on the composition of the plant: the source, nature and assimilation of plant food: fermentation, its nature, effects, and control. *Two hours a week.*

8. Biological Chemistry.—A continuation of Course 7. The composition of the animal body and of food materials; the adaptation of food to animal requirements; the chemical changes involved in the digestion and assimilation of foods; respiration; absorption and liberation of energy. Class room, *three hours a week;* laboratory, †*four hours a week.*

9. Household Chemistry.—A course including the more essential principles of organic and biological chemistry, with especial reference to their practical daily application. Required of two year students in Home Economics. Class room, *three hours a week;* laboratory, †*four hours a week.*

Biology

The courses in this department are described under the College of Arts and Sciences.

Farm Management and Agricultural Engineering

PROFESSOR SIMMONS; MR. E. JONES

For undergraduates only

2. FARM ACCOUNTING: (a) FARM MATHEMATICS.—Instruction in this subject consists in the application of its principles to all kinds of farm problems where measurements of material, extension, capacity, etc., are required.

(b) FARM RECORDS AND ACCOUNTS.—A system of records of the various operations of the farm, such as records of field labor, crop yields, milk production in the dairy, etc.; a system of accounts showing the receipts and expenditures of the farm. †*Four hours a week.*

For graduates and undergraduates

71. AGRICULTURAL ENGINEERING AND RURAL ARCHITECTURE: (a) AGRICULTURAL ENGINEERING.—Farm surveying and leveling; the plotting of farms and measurements of land; a study of drainage; estimating the investment and returns from a system of drainage; the making of roads; road material.

(b) RURAL ARCHITECTURE.—The planning, designing, location, and construction of farm buildings, water systems, sewerage, concrete construction. Class room, *two hours a week;* laboratory, **three hours a week.*

72. FARM MECHANICS AND MACHINERY: (a) FARM MECHANICS.—A study of the simpler laws of mechanics as applied to farm implements and farm machinery.

(b) FARM MACHINERY.—A study of machinery used on the farm, farm power, etc. Demonstrations and tests are made with various machines and implements. Class room, *two hours a week;* laboratory, **three hours a week.*

73. HISTORY AND ECONOMICS OF AGRICULTURE: (a) HISTORY OF AGRICULTURE.—A history of agriculture from early times to the present day; the beginning of British agriculture, and the development of modern

agriculture; the agriculture of the United States, its influence on social conditions; the importance of our leading products, and their effect on the world's commercial life; the agriculture of different sections; the development of farm machinery; progress in agricultural education. Lectures supplemented by illustrative material and slides.

(b) Economics.—The factors of agricultural production, and their economic properties, organization of the farm; rent of farm land and the law of diminishing returns from the land; systems of distribution; a study of life in the rural communities; schools and other rural organizations. Class room, *two hours a week;* laboratory, †*two hours a week.*

74. Farm Management.—A study of the various types of farming, with comparison of investment and returns from each. A study will be made of the conditions under which extensive, intensive, and mixed systems of farming prosper or fail; laying out of fields and rotations of crops; investigaton of cost of different farming operations; management of men and teams; markets and marketing. Farm surveys, with a detailed study of the conditions on different farms, will be made. Farm plans will be outlined to suit various conditions. Class room, *two hours a week;* laboratory, **three hours a week.*

Forestry

Professor Briscoe; Mr. Eaton

1. Forest Economics.—The influence of forests on climate, on conservation and distribution of water, on soils, topography, and public health; relation of forestry to agriculture, mining, stock raising, manufacturing, railroads, and other industries; character and extent of our natural forest resources; importance of the conservation of these resources. The text-book is Fernow's Economics of Forestry. *Two hours a week.*

2. General Forestry.—The importance and scope of the subject; forests as soil formers, soil fixers, and soil improvers; relation of forests to the health of the community; relation to state and national government; influence of forests on floods and droughts; geographical distribution of forests. *Two hours a week.*

3. Wood Preservation.—The structural, physical, and chemical properties of wood, particularly with relation to durability; the seasoning of wood; relation of moisture content to decay; the theory of impregnating wood; commercial methods of preservation; fire-proofing. *One hour a week.*

4. Wood Technology.—The identification and classification of the economic woods of the United States, based on inspection and simple lens laboratory work; distinguishing by means of structure, color, gloss, grain, texture, weight, density, odor, resonance, and taste; abnormal structures and defects in the woods; occurrence of various species, and their uses in the arts and trades. Class room, *one hour a week;* laboratory, †*one hour a week.*

5. History of Forestry.—The development of forestry in European countries and the United States. Fernow's History of Forestry (revised edition, 1911) is used as a text. First half of semester. *Two hours a week.*

6. Forest Mensuration.—A continuation of Forestry 11. *Two hours a week.*

7. Forest Protection.—Systems of fire protection practiced by the Federal government, state governments, and individuals or associations; protection against atmospheric agencies; against insect damages; against grazing and browsing animals; against parasitic plants and weeds. *One hour a week.*

8. Forest Mensuration Field Work.—A continuation of Course 13. **Six hours a week.*

9. Forest Products.—Dealing with forest products other than logs and lumber, such as pulp wood, veneer wood, shingles and lath, tight and slack cooperage, hoops and headings, excelsior, vehicle woods for spokes and hubs, box boards, turpentine, tannin, gums, syrups, dye woods, and charcoal; methods of utilization, markets and values. *Two hours a week.* Second half of semester.

10. Forest Mapping.—Making type and topographical maps; using data of valuation survey and also traverse board; practical work in computing aneroid readings for elevation; timber estimates for valuation

survey. Prerequisites, Forestry 6 and 11. **Six hours a week.* Second half of semester.

11. Forest Mensuration.—Instruction in the theory of forest measurements. Lectures and recitations. Graves's Mensuration is the textbook. Calculations and computations from data obtained in field work; construction of tables of growth, volume, and yield. *Two hours a week.*

12. Forest Management.—Applied systems of silvicultural management are considered in relation to all the commercially important species and types of forest in the United States. Critical discussion of management practiced on forest tracts in various regions; comparison with European systems; the work now being done in this country; practical problems to work out in the field. Class room, *two hours a week.*

13. Forest Mensuration Field Work.—Use of various instruments used in forestry practice, determining the contents of standing and felled trees and the volume of stands; study of the use of American log scales and rules; consideration of the various methods and systems of measurement used in the United States; studies of the rate of growth of trees in diameter, height, and volume; growth and increment of stand. **Six hours a week.*

14. Forest Management Field Work.—The practical application of all the forestry courses in the preparation of a working plan for an assigned tract. **Six hours a week.*

15. Silviculture.—A study of the facts which concern forest growth and the relation of the tree to external influence; the forest as a whole; characteristics of the forest, and of the forest regions of the United States; systems of forest reproduction; methods of tending and cultivating the forest. Prerequisites, Biology 61, 62, 67, and 68. *Two hours a week.*

16. Silviculture.—A continuation of Forestry 15. To be taken in connection with Forestry 18 as field work. *Two hours a week.*

17. Silviculture Field Work.—Special studies and practical work in the forest. A part of the time is devoted to the making of a forest map of 1000 or more acres of land in the vicinity of the University. A report accompanies the map describing the condition of the tract and the types

of forest growth in detail. To be taken in connection with Forestry 15. **Six hours a week.*

18. Silviculture Field Work.—Practice in thinning and planting, practical tests of the germinating quality of tree seeds, and a study of seedlings. The student is required to prepare a map and planting plan of an assigned tract. To be taken in connection with Course 16. **Six hours a week.*

19. Lumbering.—The industry considered from the economic standpoint; an account of the methods of lumbering in the different regions of the United States. Required of all major students. *One hour a week.*

20. Valuation and Regulation.—Economic and business principles underlying the management of forest products. The application of mensuration to the management of forests; principles and preparation of working plans; the normal forest; methods of obtaining sustained yields and continuous revenue. *Two hours a week.*

21. Lumbering Field Work.—In this course the student is expected to spend two weeks in a lumber camp and to prepare a written report on the operation of lumbering in that locality. Required of all major students. Time to be arranged. *Three hours a week.*

22. Forest Policy.—National and State forest policy and administration; relation of corporations and private owners in regard to forest policies; applied forest management. Open to major students only. *Two hours a week.*

23. Current Forestry Literature.—This course consists of reviewing periodicals and current forestry literature and in making a card index for reference work for the same. Elective for seniors majoring in Forestry. Class room, *one hour a week.*

24. Forest Law.—Laws of the Federal Government and of the several states concerning forests and forestry. *One hour a week.*

25. Thesis.—The preparation of a thesis setting forth some original work or investigation on the part of the student along the lines of Forestry. *Two hours a week.*

26. Thesis.—A continuation of Forestry 25. *Three hours a week.*

Home Economics

Associate Professor Freeman; Miss Beach; Miss Randall; Miss Borden

For undergraduates only

1. Cookery.—Lectures, recitations and laboratory practice. This course provides instruction in the general principles controlling the preparation of food, with study of typical foods. It aims to develop fine technique in the use of materials and utensils. Class room, *two hours a week;* laboratory, †*four hours a week.*

2. Cookery.—Continuation of Course 1. The serving of simple meals with the study of dining room equipment and rules of table service are included in this course, as well as instruction in marketing and general household accounts. It is the aim of this course to familiarize the student with the business side of housekeeping. Class room, *two hours a week;* laboratory, †*four hours a week.*

3. Dietetics.—A general review of the principles of cookery with direct reference to diet. Special emphasis is placed upon diet for children both in health and disease. Prerequisites, Home Economics 1 and 2. Class room, *two hours a week;* laboratory, †*two hours a week.*

4. Dietetics.—Continuation of Course 3. Consideration of food for the sick and convalescent, with a study of special diets. Class room, *two hours a week;* laboratory, †*two hours a week.*

5. Advanced Cookery.—A return to general cookery is made through work in large quantities and the preparation and serving of meals. Canning and preserving are taken up and demonstrations given by the students. Prerequisite, Home Economics 4. Class room, *one hour a week;* laboratory, †*three hours a week.*

6. Fancy Cookery and Field Work.—The preparation, garnishing, and decorating of the more elaborate dishes are taken up, as well as the preparation and serving of a formal dinner. Wholesale and retail markets, factories, mills, and dairies are visited as opportunity offers. Prerequisites, Home Economics 1 and 2. †*Three hours a week.*

7. Advanced Cookery.—This course embraces the principles of Course 5, and is required of students in the Two Years Course. Prerequisites, Home Economics 1 and 2. Class room, *one hour a week;* laboratory, †*four hours a week.*

8. Dietetics.—This course embraces the principles of Courses 3 and 4, and is required of students in the Two Years Course. Prerequisites, Home Economics 7. Class room, *one hour a week;* laboratory, †*four hours a week.*

9. Plain Sewing.—The fundamental principles of hand and machine sewing are taught in connection with the making of undergarments, towels, napkins, etc. †*Four hours a week.*

10. Advanced Sewing.—Pattern drafting and adjustment. Dressmaking. Continuation of Course 9. †*Four hours a week.*

11. Fine Sewing.—Fine hand and machine work, hemstitching, and simple embroidery. Prerequisites, Home Economics 9 and 10. †*Four hours a week.*

12. Advanced Handwork.—Continuation of Courses 13 and 14. †*Four hours a week.*

13. Handwork.—Knot and string work; knitting and crocheting. †*Four hours a week.*

14. Handwork.—Basketry and weaving. †*Four hours a week.*

15. Applied Art.—A study of line, mass, and color, with practical applications. Class room, *one hour a week;* laboratory, †*three hours a week.*

16. Applied Art.—Continuation of Course 15. Emphasis is placed upon design. Class room, *one hour a week;* laboratory, †*three hours a week.*

17. Construction.—A study of the house, and plans for its construction. Laboratory work in designing and executing ground floor plans for a modest home and plans for kitchen laboratories. Special attention given to details. Class room, *one hour a week;* laboratory, †*two hours a week.*

18. House Furnishing and Decoration.—Study of textiles, source, nature, preparation, use, etc., and a study of color schemes especially adapted to use in house decoration. The special problem of decoration for the house planned in Course 17 is taken up and the color schemes worked out in actual materials. Prerequisite, Home Economics 17. Class room, *one hour a week;* laboratory, †*two hours a week.*

19. Laundering.—Principles and processes studied and practiced. Selection and care of equipment for both home and school work. Removal of stains, bluing, softening of water, soap making. Class room, *one hour a week;* laboratory, †*one hour a week.*

20. Household Care and Operation.—Lectures, recitations, and practice. The principles of housework are examined, methods are studied, and practical applications are made. Class room, *one hour a week;* laboratory, †*two hours a week.*

21. Practical Housework.—A course affording opportunity for the student to show her power in managing a household and serving luncheons to twelve or more people in a specified time, with a limited amount of money. Time to be arranged. One semester. Senior year. *two hours a week.*

22. Home Nursing.—Consideration of the sick room and its appointments, emergencies, contagious diseases, bandaging, general care of the patient. *One hour a week.*

23. Methods.—The particular methods applicable to teaching home economics are investigated. An effort is made to discover the means whereby a wholesome atmosphere may be secured in the class room, and how the independence and self-confidence of the pupils may be fostered. Courses of study are considered and outlined. *One hour a week.*

24. Practice Teaching.—Required of students in the senior year, and done under supervision. *Two hours a week.*

26. Seminar.—General discussion of articles relating to home economics appearing in the magazines. An effort is made to keep in touch with the literature of the subject, and be conversant with recent methods and developments. *One hour a week.*

28. Thesis.—A thesis on a subject relating to home economics, showing independent work is required of all students taking the four years curriculum. Senior year. *Three hours a week.*

30. Camp Cookery.—Designed especially for men in the Forestry department. Open to any students except freshmen. Class limited to 18. The general principles of cookery are taken up by means of laboratory practice, with especial emphasis upon preparation of foods suitable for camp life. †*Two hours a week.*

Horticulture

Professor Brown; Associate Professor Hitchings; Mr. Lurie

For undergraduates only

1. Commercial Pomology.—A course in methods of picking, grading, packing, storing, and marketing fruit. The laboratory work of this course will acquaint the student with the more important varieties of fruit in this State. Class room, *two hours a week;* laboratory, †*two hours a week.*

2. Practical Pomology.—A study of orchard sites and soils, methods of propagating, setting, cultivating, fertilizing, pruning, and spraying Class room, *two hours a week;* laboratory, **three hours a week.*

3. Systematic Pomology.—A systematic study of the types and varieties of the leading groups of fruits, their evolution and adaptation to environment; also distribution of varieties in the State. Prerequisites Courses 1 and 2. Class room, *two hours a week;* laboratory, †*two hours a week.*

4. Vegetable Gardening.—A course in practical vegetable gardening· grading, marketing and storing of vegetables, including the systematic study of varieties and types for home and commercial use. Class room, *two hours a week;* laboratory, †*two hours a week.*

5. Landscape Gardening.—A study of the principles of landscape art and of the materials used in making landscape pictures. Special attention is given to the improvement of the home grounds. Class room, *two hours a week;* laboratory, †*two hours a week.*

6. Small Fruit Culture.—A study of the bush and vine fruits, including strawberries; adapted varieties, with culture, picking, grading, packing and marketing—home and commercial. Class room, *two hours a week;* laboratory, †*two hours a week.*

7. General Floriculture.—A study of the culture, propagation, management, and care of flowers for home decoration and commercial purposes. Class room, *two hours a week;* laboratory, †*two hours a week.*

8. Greenhouse Construction.—A study of the various types of greenhouses and the methods of construction. Estimates and plans are made for houses suitable for conservatories, private estates, and commercial floriculture. Cost and methods of installing heating systems, show rooms, and storage houses are also considered. Class room, *two hours a week;* laboratory, †*two hours a week.*

10. Plant Breeding.—A course in plant breeding as applied to variation, selection, and hybridization, as adapted to garden and fruit crops. *Two hours a week.*

11. Thesis.—Students specializing in Horticulture are required to prepare a thesis on some subject pertaining to Horticulture. *Three hours a week.*

12. Thesis.—A continuation of Horticulture 11. *Three hours a week.*

For graduates and undergraduates

51. Seminar.—Preparation and discussion of papers dealing with the recent problems and experiments in Horticulture. Required of students taking major work in Horticulture. Prerequisites Courses 1 and 2. *One hour a week.*

52. Seminar.—A continuation of Ht 51. Requirements and prerequisites the same. *One hour a week.*

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 226.

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 227.

COLLEGE OF ARTS AND SCIENCES

FACULTY OF INSTRUCTION

JAMES STACY STEVENS, M S., LL. D. *Professor of Physics*
DEAN
MERRITT CALDWELL FERNALD, PH. D., LL. D.
Emeritus Professor of Philosophy
LUCIUS HERBERT MERRILL, SC. D.
Professor of Biological Chemistry
JAMES NORRIS HART, C. E., M. S., SC. D.
Professor of Mathematics and Astronomy
JOHN HOMER HUDDILSTON, PH. D.
Professor of Greek and Classical Archæology
RALPH KNEELAND JONES, B. S. *Librarian*
JACOB BERNARD SEGALL, PH. D.
Professor of Romance Languages
GEORGE DAVIS CHASE, PH. D. *Professor of Latin*
CAROLINE COLVIN, PH. D. *Professor of History*
WALLACE CRAIG, PH. D. *Professor of Philosophy*
ROLAND PALMER GRAY, M. A. *Professor of English*
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
GARRETT WILLIAM THOMPSON, PH. D. *Professor of German*
GUY ANDREW THOMPSON, PH. D.,
Professor of English Literature
WINDSOR PRATT DAGGETT, PH. B.
Professor of Public Speaking
MINTIN ASBURY CHRYSLER, PH. D. *Professor of Biology*
ARTHUR JULIUS JONES, PH. D *Professor of Education*
GEORGE WARE STEPHENS, PH. D.
Professor of Economics and Sociology

CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
ANDREW PAUL RAGGIO, PH. D.
Associate Professor of Romance Languages
LEON ELMER WOODMAN, PH. D. *Associate Professor of Physics*
HARLEY RICHARD WILLARD, PH. D.
Associate Professor of Mathematics
ALICE MIDDLETON BORING, PH. D.
Associate Professor of Zoölogy
JAMES McCLUER MATTHEWS, A. M.
Associate Professor of Economics and Sociology
JOHN CALVIN MELLETT, A. B. *Associate Professor of English*
DANIEL WILSON PEARCE, A. M.
Associate Professor of Education
TRUMAN LEIGH HAMLIN, M. A.
Assistant Professor of Mathematics
HARRY NEWTON CONSER, M. S., M. A.
Assistant Professor of Botany
LLOYD MEEKS BURGHART, M. A.
Assistant Professor of Chemistry
ROBERT RUTHERFORD DRUMMOND, PH. D.
Assistant Professor of German
ALBERT GUY DURGIN, M. S. *Assistant Professor of Chemistry*
RAYMOND HARMON ASHLEY, PH. D.
Assistant Professor of Chemistry
*LOWELL JACOB REED, M. S. *Instructor in Mathematics*
WALTER EDMOND WILBUR, M. S. *Instructor in Mathematics*
EARLE OVANDO WHITTIER, B. S. *Instructor in Chemistry*
HENRY ROBBINS BARROWS, A. B. *Instructor in Biology*
JOHN HARRY PARRY, A. B. *Instructor in English*
LEROY FRANKLIN BLISS, A. B. *Instructor in English*
HERBERT SOLEY BAIN, A. B. *Instructor in German*
DAVID LEE CLARK, A. M. *Instructor in English*
RALPH MAYNARD HOLMES, M. A. *Instructor in Physics*
MARTIN ANDREW NORDGAAR, A. M.
Instructor in Mathematics
JOSEPH SPEAR, A. B. *Instructor in Mathematics*

---

* Absent on leave from Sept. 1, 1914 to Sept. 1, 1915

JAMES NEWELL STEPHENSON, M. S. *Instructor in Chemistry*
VINCENT MILO TRANSUE, M. S. *Instructor in Physics*
CHESTER EARL ANDREWS, M. S. *Instructor in Chemistry*
BERT EMSLEY, A. B..... *Instructor in English*
RAYMOND FLOYD, B. A. *Instructor in German*
NORMAN RICHARDS FRENCH, B. A. *Instructor in Physics*
EARL EVERETT KEYES, A. B. *Instructor in English*
FRANCOIS JOSEPH KUENY, L. és L.
Instructor in Romance Languages
SIDNEY WINFIELD PATTERSON, B. S.
Instructor in Biological anl Agricultural Chemistry
GLEN BLAINE RAMSEY, A. M. *Instructor in Biology*
ANTOINETTE TREAT WEBB, B. A..... ....*Assistant in English*
ESTELLE INEZ BEAUPRE, B. A. *Assistant in Romance Languages*
MARGARET JUNE KELLEY, B. A. *Assistant in German*
WOODBURY FREEMAN PRIDE, B. S. *Assistant in Biology*
ROSCOE WOODS, B. A. *Assistant in Mathematics*

GENERAL INFORMATION

The College of Arts and Sciences offers a course of liberal training equivalent to that of the standard New England college. It designs particularly to meet the needs of three classes of students:

1. Men and women who desire to pursue a cultural college course.
2. Men and women who desire to enter profressional schools which require a collegiate degree.
3. Men and women who wish to fit themselves for the profession of teachers in secondary schools, or for school superintendencies.

ADMISSION

The requirements for admission are given in full on pages 56-68. They are practically the same as for other New England colleges, and may be met by a four years preparatory course in a good high school or academy.

FRESHMAN STUDIES

The character of the work of the first year is conditional somewhat upon the subjects offered for admission.

It is recommended that all students in this College register for as much of the required work as practicable in their freshman year, and they are expected to complete the whole of this work by the end of their sophomore year.

MAJOR SUBJECT

Beginning with the sophomore year each student must select, in some one department, work to be pursued three or four years, on the average of five recitations a week. Any one of the following departments may be chosen for major work: Biology, (including Zoölogy, Botany, Physiology, and Entomology), Chemistry, Economics and Sociology, Education, English, German, Greek and Classical Archæology, History, Latin, Mathematics, and Astronomy, Philosophy, Physics, Romance Languages (including French, Spanish, and Italian).

In many cases the selection of a major subject need not be made before the beginning of the sophomore year. The major subject must include work counting not less than six nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this must be made up from such other related departments as the professor under whose direction the major subject is taken may prescribe. The remainder of the student's work may be selected from any department or departments of the University. This must be done with the approval of the head of the department in which the student has chosen his major subject and must bear some useful relation to his other work.

The head of the department in which the student has chosen his major subject becomes his major instructor, and during the remainder of the course this instructor acts as chief adviser in all matters relating to the curriculum, and is the representative of the student before the Faculty.

GRADUATION REQUIREMENTS

The College of Arts and Sciences has the following graduation requirements: (One year's work in college is regarded as the equivalent to two years' work in preparatory school.)

1. Language Group.—This is composed of courses in language and literature, including all the courses offered in the departments of English,

German, and Romance Languages, and such courses offered by the departments of Greek and Latin as deal with the Greek and Latin languages and literatures, or presume some knowledge of these languages.

2. Science and Mathematics Group.—This is composed of the courses offered in mathematics and the biological and physical sciences, including all the courses offered by the departments of Mathematics, Biology, Chemistry, Biological Chemistry, and Physics.

3. Social Science Group.—This is composed of the courses offered in the departments of History, Economics and Sociology, Philosophy, Education, and Bibliography; and the courses in History, Archæology, Fine Arts, and Biblical Literature offered in other departments and not included in the first group.

4 Military Science and Tactics, two years, three hours a week.

5. Physical Training, one year, three hours a week.

Every candidate for the Bachelor of Arts degree is required to complete the following amount of work in college: (a) eight hours prescribed in English; (b) ten or sixteen hours elected in Group 1, of which six or ten hours must be in foreign languages; (c) ten hours elected in Group 2; (d) ten hours elected in Group 3; (e) military science and tactics, two years, three hours a week; (f) physical training, one year, two hours a week.

A student who enters college with a minimum of four units credit in foreign languages is required to elect sixteen hours in Group 1, of which at least ten hours shall be in foreign languages. A student who enters with more than the minimum of four units credit is required to elect at least ten hours in Group 1, of which at least six hours shall be in foreign language.

BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B. A.). The curricula demand 25 credits and are regularly completed in four years; but a student of exceptional preparation and application may complete the requirements in three years. Students fitting themselves for professional or technical schools are often encouraged to do this, but prospective teachers are recommended to spend four years in college.

No outline of the curricula in the College of Arts and Sciences is given in the catalog, but students may have such an outline presented to them by applying to the professor in charge of the department in which they are interested. Groups of studies may be made up which would be desirable for students intending to prepare for teaching, or to enter upon the study of law, medicine, or theology.

In this college, 95 out of the 125 required hours, must be made with a grade of C or above.

BACHELOR OF PEDAGOGY CURRICULA

Graduates of the Maine normal schools who have completed a course in a Class A high school, and who have had one year of successful experience in teaching, are admitted to the University as candidates for the degree of Bachelor of Pedagogy. Such students are required to complete seventy-five semester hours, of which twelve shall be in the department of Education, and a sufficient number of the remaining hours shall be devoted to some one department to give them a satisfactory equipment for high school teaching.

CURRICULUM IN JOURNALISM

The University has recently established a curriculum in journalism, which extends over four years and includes the following subjects:

Freshman year, English, French, German, or Spanish; Science—Physics, or Chemistry, or Biology; Economics, American Government, Economics, Political Economy; English 18th and 19th Century Prose; Bibliography; Philosophy, Logic;. Military and Physical Training. Sophomore year, Economics, Sociology, and Social Reforms, alternating with Municipal Government; History of English Literature; English History, alternating with History, Medieval History, Science; Victorian Literature; Military and Physical Training. Junior year, Economics, Advanced Political Economy; Democracy; History of the United States; History of American Literature; Shakespeare, or History of the English Drama; Journalism; Elective, Science, or Language, or Philosophy, or Art, 3 hours, Senior year, Economics, Public Finance, International Law, Business Law; Specialized Writing; Recent History; Literary Criticism; Journalism; Elective, Language, or Philosophy, or History of Education, or Art 5 hours.

Students who complete this curriculum will receive the Bachelor of Arts degree for major work in English.

GRADUATE CURRICULA

A candidate for the degree of Master of Arts must have received the corresponding bachelor's degree from this institution or one granting a fully equivalent degree.

At least one year must elapse between the conferring of the bachelor's and the master's degrees.

No work done before the conferring of the bachelor's degree may be counted toward the master's degree.

The candidate shall devote at least one year to resident graduate study and shall complete work of the equivalent of six credits or fifteen hours per week throughout a college year.

The course of study shall be submitted to and approved by the committee on advanced degrees.

It shall consist of work in one major department or subject in which the candidate has already pursued undergraduate study for at least two years, and work in not more than two minor subjects bearing a distinct relation to the general plan or purpose of the major subject.

At least three-fifths of the work must be done in the major subject.

All of the work must be of advanced grade and must be tested by examinations which the candidate must pass with distinction.

The candidate shall prepare as a part of his course of study a satisfactory thesis on some topic connected with his major subject.

GENERAL LECTURE COURSE

A course of weekly lecures is given in the College of Arts and Sciences each semester. Attendance is open to all, and credit is granted year, the lectures will be in charge of the department of English in the fall semester, and the departments of Education and Philosophy in the spring semester.

CURRICULA IN PRE-MEDICAL WORK

The marked increase in the number of pre-medical students in attendance at the University has led the departments concerned to establish definite programs of work for such students. For students who cannot spend more than a single year in pre-medical work, a one-year curriculum is provided which fully meets the requirements of a number of medical colleges, but prospective medical students are strongly recommended to

spend at least two years in such work, not only because a better general education is thus possible, but because class A schools on the list of the American Medical Association require two or more years antecedent work. By arrangement with certain medical schools a student completing three years at this institution may enter the medical school, and receive his bachelor's degree here at the completion of his first year at the medical school.

One-year Curriculum

General Biology	4	General Biology	4
General Chemistry	4	General Chemistry	5
General Physics	5	Laboratory Physics	2
English	2	English	2
German	3	German	2
		Elective	2
	18		17

Two-year Curriculum

FIRST YEAR

General Biology	4	General Biology	4
General Chemistry	4	General Chemistry	5
English	2	German (or French)	5
German (or French)	5	English	2
Military	1	Military	1
Physical Training	½	Physical Training	1
	16½		18

SECOND YEAR

Vertebrate Anatomy	4	Animal Embryology	4
Volumetric Analysis	2	Organic Chemistry	5
General Physics	5	Laboratory Physics	2
French or Psychology and Scientific German	5	French or Elective	5
Military	1	Military	1
	17		17

Three-year Curriculum

FIRST YEAR

General Biology	4	General Biology	4
General Chemistry	4	General Chemistry	5
English	2	English	2
German (or French)	5	German (or French)	5
Military	1	Military	1
Physical Training	½	Physical Training	1
	16½		18

SECOND YEAR

Vertebrate Anatomy or Animal Histology	4	Animal Embryology	4
Qualitative Analysis	5	Organic Chemistry	5
General Physics	5	Laboratory Physics	2
English	1	English	1
Scientific German	2	Urinary Analysis	1
Military	1	Military	1
	18		14

THIRD YEAR

Animal Histology or Vertebrate Anatomy	4	Materia Medica	3
Genetics	2	Prescriptions	3
Volumetric Analysis	2	English	3
English	3	Social Psychology	3
Psychology	3	Elective	4
	14		16

DEPARTMENTS OF INSTRUCTION

NOTE:—A star (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit

for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases, two and one-half hours' work give credit for one hour.

Courses designated by an odd number are given in the fall semester; those designated by an even number in the spring semester.

ART

Professor Huddilston offers certain courses in art which are described in connection with the department of Greek

ASTRONOMY

Courses in astronomy are described under the department of Mathematics

BIBLIOGRAPHY

Professor R. K. Jones

1. Bibliography.—Origin of the alphabet; development of writing; inscriptions; manuscripts; invention of printing; early printed books; modern bookmaking; bookbidning and the care of books; library processe sand aids; public documents; periodicals; libraries, ancient and modern. A lecture course, with collateral reading and reference work. *One hour a week.*

Three lectures are given on The Library and Its Uses; Classification and the Catalog; and Reference Books and Their Use. Required of all freshmen.

BIOLOGY

Professor Chrysler; Associate Professor Boring; Assistant Professor Conser; Mr. Barrows; Mr. Ramsey; Mr. Pride

The course in general biology forms the basis for work in both zoölogy and botany. After the completion of this course, students may register for courses in either branch of the subject.

For undergraduates only

1, 2. General Biology.—This course is designed to be part of the education of any college student and is open to all candidates for the arts

degree as well as to more special students. It is required of all students in the College of Agriculture, including those taking the Forestry and Home Economics curricula as well as those intending to take up the study of medicine or to follow any line of applied biology. It deals with the fundamental principles of biology and thus forms the basis for further work in either zoölogy or botany. In the laboratory each student studies with the microscope, and dissects selected animals and plants from the simpler forms, such as the Protozoa and Algæ, to the complex, such as the frog and lily. Class-room, *two hours a week;* laboratory, †*four hours a week.*

3. Principles of Breeding, or Genetics.—A general review of the facts that form the basis of our knowledge of inheritance. General biology is required as a preparation for this course. *Two hours a week.*

4. Sanitary Science.—Attention is given to the conditions that influence individual and public health. This includes the nature of diseases, their transmission and control, and laws of personal and community sanitation that are often violated and should be understood. Open to any woman student who has taken general biology. *Two hours a week.*

8. Entomology and Parasitology.—This course is planned especially for students in the College of Agriculture, and deals chiefly with insect pests. The structure, life histories, and classification of the different orders are illustrated by common farm and forest insects. This work is used as a basis for the study of economic problems, such as the damage done by the special insect pests of farm, garden, orchard and forest, and of domestic animals; methods of control; the relation of insects to health. Some work on animal parasites other than insects is included. General biology is required as a preparation. Class-room, *two hours a week;* laboratory, †*four hours a week.*

9. Plant Taxonomy and Histology. 10. Plant Physiology and Pathology.—A combined course for one year for students in Agriculture, consisting of: (1) practice in the identification of the higher plants, (2) microscopic work on the cell, tissues and organs of the higher plants, (3) a study of the functions of plants, including nutrition, growth, and response, (4) a study of the diseases of plants, especially those caused by fungi. Prerequisite, general biology. Class-room, *two hours a week;* laboratory, †*six hours a week.*

14. Elementary Botany.—Studies in the structure and functions of the organs of plants; agents of pollination and the distribution of seeds and fruits; exercises in plant analysis and the identification of species in the field. Required of Two Years Pharmacy students. Class-room, *one hour a week;* laboratory, † *four hours a week.*

15. Pharmaceutical Histology.—Exercises on the use of the microscope; the magnification of objects and microscopic measurements. A study of cells and tissues, and food products found in them; followed by exercises in the detection of the common adulterants of familiar drugs. Open to students who have taken elementary botany. Class-room, *one hour a week;* laboratory, †*four hours a week.*

17. Wood Identification.—The identification of the various commercial woods by means of the unaided eye and the microscope. Open to students in Chemical Engineering, and to others by permission. †*Four hours a week* (counts one credit hour.) Second half of fall semester.

For graduates and undergraduates

51. Vertebrate Anatomy.—Types of the Vertebrata are studied and their structure compared. Careful dissections are made of repesentatives of the higher classes of animals, beginning with a fish and ending with a mammal. It must be preceded by general biology. Class-room, *two hours a week;* laboratory, †*four hours a week.*

52. Animal Embryology.—This course is intended to instruct students in the fundamental facts of the development of vertebrates. It includes lectures on the comparative embryology of vertebrates; and laboratory work on the fish, frog, and chick. Vertebrate anatomy is required as a preparation. Class-room, *two hours a week;* laboratory, †*four hours a week.*

53. Animal Histology.—The study of the microscopic structure of the higher animals. It consists of the comparative study of cells, the structure of tissues and organs and the methods of preparing them for microscopic study, students thus becoming familiar with hardening, embedding, sectioning, staining, and mounting. Vertebrate anatomy is required as a preparation for this course. Class-room, *two hours a week;* laboratory, †*four hours a week.* Given in 1915-16 and alternate years.

55. Animal Physiology.—Intended for those who already have an elementary knowledge of general biology and physiology. The course deals with the functions of the organs of the body and is accompanied by laboratory work to illustrate their activities. It should be preceded by vertebrate anatomy. Class-room, *two hours a week;* laboratory, †*four hours a week.* Given in 1916-17 and alternate years.

61. Plant Histology.—The microscopic structure of the higher plants; the various tissues, the root, stem, leaf, and spore-bearing organs; the adaptations of plants to external conditions, considered from the standpoint of structure; killing, sectioning, staining and mounting of plant tissues. Prerequisite, vertebrate anatomy. Class-room, *two hours a week;* laboratory, †*four hours a week.*

62. Plant Physiology.—The plant is considered from the standpoint of its activities; absorption and transport of raw material; manufacture, transport, and storage of food; growth, movement in response to stimuli. Prerequisite, general biology and plant histology. Class-room, *two hours a week;* laboratory, †*four hours a week.*

64. Plant Ecology.—Presents briefly two aspects of the subject: (1) Physiographic ecology studied in the field as far as the season permits; (2) Structural ecology, viz.—the histological features characteristic of plants growing in extreme habitats, and of those having special modes of nutrition. The course must be proceded by plant histology. Class-room, *one hour a week;* laboratory, †*four hours a week.* Given in 1915-16 and alternate years.

66. Plant Pathology.—The diseases of plants, especially those caused by fungi; destruction of timber by fungi; methods of combatting plant diseases. This course must be preceded by general biology and may profitably be preceded by plant histology. Class-room, *two hours a week;* laboratory, †*two hours a week.* Given in 1914-15 and alternate years.

67, 68. Forest Botany.—This course consists of a systematic study of trees and shrubs, particular attention being given to those of the eastern states, and the identification of them in summer and winter aspects. Special attention is given to the forest trees of commercial value and their geographical distribution. Field work in the identification of

local species and preparation of a forest herbarium are required in the autumn and early winter months. The course includes dendrology and forest ecology. This course must be preceded by general biology. Class-room, *two hours a week;* laboratory, †*four hours a week.*

71, 72. Seminar.—Preparation and discussion of papers dealing with recent advances in zoölogy and botany. Open to seniors and graduate students. *One hour a week.*

73, 74. Thesis.—Students in the College of Agriculture specializing in biology are required to prepare a thesis on some subject approved by the head of the department. *Three hours a week.*

75, 76. Advanced Zoölogy.—This course offers an opportunity for special zoölogical work along lines suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. In general each student is given a problem for investigation and encouraged to devise methods for its solution. *The time varies and the work may be continued a number of semesters.*

77, 78. Advanced Botany.—This course offers an opportunity for special work in botany along the lines best suited to the future plans of the student. It may consist of laboratory work, field work, or reading, or a combination of all three. Courses which have recently been given under the caption include: morphology of Pteridophytes; structure and technology of woods; structural and physiographic ecology; advanced plant physiology; special problems assigned to individuals. *The time varies and the work may be continued a number of semesters.*

CHEMISTRY

The courses in this department are described under the College of Technology

ECONOMICS AND SOCIOLOGY

Professor Stephens; Associate Professor Matthews

For undergraduates only

1a. Political Economy.—An introductory course dealing with the general principles and problems of modern economics; production, distribution, and consumption; value, commerce, labor problems, and various other topics in this field of study. Text-book and general discussions. *Three hours a week.*

1b. Political Economy.—In general, similar to 1a, but abbreviated and modified to meet the need of technical and agricultural students. *Two hours a week.*

2a. Money and Banking.—A course introductory to the study of money, banking, and finance. The history of money and the principal forms of currency used in the leading countries; the principles and workings of the various banking systems of America and foreign countries; the monetary history of the United States. Text-book and lectures. *Three hours a week.*

2b. Money and Banking.—Essentially similar to 2a, but planned especially for students in the Colleges of Technology and Agriculture. *Two hours a week.*

3. Elements of Politics.—An introductory course dealing with such subjects as the nature of the state, sovereignty, liberty of the individual, structure of government, political parties, and the province of government. *Three hours a week.*

6. Business Law.—This course aims to acquaint the student with those legal principles and practices which are essential to a business life and with which every citizen should be familiar; rights; contracts, agency, partnerships and corporations, bailments, guaranty, insurance, etc. Text-book, readings, and discussions. Students electing this course are generally advised to take it in the senior year. *Three hours a week.*

For graduates and undergraduates

52. Public Finance.—This course is devoted to an extended study of public financial problems. Taxation and various systems for the collection of public revenue in America and Europe will be studied in detail. Financial crises and depressions, their history and causes, will receive considerable attention. *Three hours a week.* Given in 1915-16 and alternate years.

55. Sociology.—This course is devoted to a study of the principles which underlie normal social relations and processes. The application of those principles to current social phenomena will receive considerable emphasis. *Three hours a week.*

56. Social Pathology.—A critical study of the dependent, defective, and delinquent classes; causes, magnitude, methods of prevention and amelioration. *Three hours a week.*

60. Public Utilities.—In this course will be considered the economic and legal principles and problems involved in public and private ownership and regulation of municipal utilities in the United States and Europe. *Two hours a week.* Given in 1915-16 and alternate years.

63. Governments of Europe.—A brief review of the ancient types of government, followed by a detailed comparative study of modern European national government. Political parties and current national problems will receive some attention. Lecture course with readings. *Three hours a week.*

64. Socialism and Social Reform.—A study of the development and present trend of the socialistic movement; the single tax, profit-sharing, and coöperation; limits of private and public activity. *Three hours a week.* Given in 1915-16 and alternate years.

67. Municipal Government.—A study of the system of government and special problems of the leading European cities as compared with the same in American cities. New movements for civic and social betterment to meet the necessities of American urban life. *Two hours a week.* Given in 1914-15 and alternate years.

68. American Government.—The principles and interpretation of the Federal Constitution, history of political parties, organization of state governments, and the working of the Federal Congress. *Three hours a week.* Given in 1914-15 and alternate years.

71. Labor Problems.—A study of the evolution of organized labor, and the special problems of present-day industry, such as trade unions, woman and child labor, immigration, employers' associations, agencies of industrial peace, etc. *Two hours a week.* Given in 1915-16 and alternate years.

73. Transportation.—The historical development of transportation in the United States; railway organization and control; methods of financing; rate-making; federal and state legislation; public regulation and ownership of railroads in leading European countries; railway commissions. *Three hours a week.* Given in 1915-16 and alternate years.

75. Business Organization.—In this course will be considered the origin and development of the corporation; the significance of large scale production; the economic and legal aspects of business combinations; corporation finance; governmental regulation. *Three hours a week.* Given in 1916-17 and alternate years.

76. Business Management.—A course dealing with the methods of business; system; efficiency, cost accounting; principles of buying, selling advertising, etc. *Three hours a week.* Given in 1915-16 and alternate years.

79. International Law.—The principles, history, and prominent "cases" of international law take up most of the course. Considerable attention will be given to American diplomacy and the most important foreign treaties. *Three hours a week.* Given in 1916-17 and alternate years.

81. Rural Sociology.—A study of the social factors affecting country life; the economics of farming; rural coöperative organizations; the movements for the improvement of rural life. *Two hours a week.* Given in 1916-17 and alternate years.

85. Advanced Course on the Family.—An historical consideration of the origin and growth of the family; the legal and economic relations of members of the family; its significance as an institution; pathological manifestations. *Two hours a week.* Given in 1915-16 and alternate years.

Primarily for graduates

106. Economic Theory.—A critical study of modern theories of wealth and its distribution; the contributions to theory of the classical, historical, and *Austrian* Schools. Current writers will receive considerable attention. *Two hours a week.* Given in 1915-16 and alternate years.

110-111. Seminar.—In this course, provision is made for the guidance of the work of students properly qualified to engage in economic research. At the beginning of each semester, some specific topic will be selected, upon which an extended original investigation will be undertaken. *Two hours a week.*

Summer Term

1s. Sociology.—A systematic study of normal society, its essential characteristics and processes, social institutions, the family, religious organisms, and such current social problems as divorce, poverty and its relief, criminality, and prison reform, etc. Lectures, readings, papers, and discussions.

2s. Business Law.—The purpose of this course is to acquaint the student with those legal principles and practices which are essential to a business life and with which every active citizen should be familiar; rights, contracts, agency, partnerships and corporations, bailment, guaranty, insurance, etc. Text-book, readings, and discussions.

3s. Business Organization.—In this course will be considered the origin and development of the corporation; the significance of large scale production; the economic and legal aspects of business combinations; corporation finance; governmental regulation.

Every reasonable effort will be made to meet the needs of all students desiring to take work in this department. Courses not regularly announced for the Summer Term, which may be desired by a sufficient number of qualified students, will be given, so far as practicable.

EDUCATION

Professor A. J. Jones; Associate Professor Pearce

For undergraduates only

2. Beginning Course in Education.—An introductory course in education. A general survey of the field of education, dealing with the aims of education, the applications of psychology to education, and some of the elementary principles of method. Designed for those who are beginning the study of education, or who cannot take the more specialized courses. *Three hours a week.*

For graduates and undergraduates

51, 52. History and Principles of Education.—This course is a combination of the course formerly given as History of Education with

that of Principles of Education. This course will consider the principles underlying modern educational theory and practice and the historical development of our present school system, and school curriculum. The work of the year will be divided roughly into (1) a rapid survey of the history of education from the Greeks to the present time. (2) A careful study of various phases of educational theory and practice; their historical development, the principles underlying them, and their application to present conditions. Some of the topics considered will be: the school as a social institution; public support and control of education; the curriculum of the school; the place of the child in education; the teacher; interest; correlation; formal discipline. (3) An intensive study by each student of some special topic more or less directly related to the major work. This will involve outside reading, investigation, and written reports. Although credit will be given for one semester's work, it is advisable that all students registering for these courses continue throughout the year. *Three hours a week.*

61. Organization and Administration.—Problems growing out of the establishment, support and control of schools; the part taken by different agencies in solving these problems,—the Nation, the State, and the local community; typical states studied; a comparaive study of the organization and administration of education in Prussia, France, and England. Special study of the school system of Maine. *Three hours a week.*

62. Organization and Administration Continued.—Problems within the state; town schools and city schools; duties of all officers; certification; teachers and supervision; financial support; defects and excellences of present organization; problems within the school; powers and duties of the teachers; programs and courses of study; government, and student activities; grading and backward pupils; class and individual instruction. *Three hours a week.*

55. Principles of Education.—The design of the courses is to set forth (1) the meaning and aims of education as related to the individual and to society; (2) the relative educational value of studies and their organization into the curriculum, as indicated by the recapitulation, culture epoch, formal discipline, and other theories; and (3) the methods of teaching as determined by the mental processes involved; particularly, instinct, habit, attention, interest, appreciation, induction, and deduction. *Three hours a week.*

72. Methods of Teaching.—The general principles underlying method will be considered and the place and function of the different studies discussed. Those interested in the teaching of special subjects will be given an opportunity to specialize in the methods applying to these subjects. Observation of classes in surrounding high schools and the higher grammar grades will constitute a regular part of this course. *Three hours a week.*

73. Secondary Education.—The development of our present system of secondary schools; the function of the secondary school, its relationship to the elementary schools, to the college, and to the social state; the course of study; the equipment; secondary school activities; organization and management of the secondary school; the adolescent. *Three hours a week.*

75, 76. Practice Course.—Arrangement for practice work in the Orono high school is made for the present year. Careful supervision of the work will be made by the Professor in charge and by the Principal of the high school. Students who take this course will teach five periods a week for a half year. Four hours credit will be given. Prerequisite, one semester's work in education.

77. Class Management.—General conduct of classes; art of questioning; oral and written tests; systems of marking; observation of classes. Required of all taking practice work. *One hour a week.*

Primarily for graduates

101, 102. Applications of Educational Theory.—For advanced students only. Research and experiment in the application of educational theory to our public schools. Various problems will be investigated. *Two hours a week.*

Summer Term

62s. Educational Investigation.—This course is especially designed for superintendents who wish some insight into methods of investigation. It should also prove helpful to principals of secondary schools who have some specific problems to work out, and to principals of grammar schools and primary schools in larger cities. The course will be devoted to

the intensive study of typical investigations and methods of measuring results in education. Some topics considered will be: studies of elimination and retardation; scales of handwriting, drawing, and composition; the Courtis tests; methods of marking and the reliability of marks; school expenditures; school records; the teaching staff.

55s. Principles of Education.—This course deals with the fundamental bases, aims, and values of education, the relative educational values of the different subjects, both from the standpoint of the individual and that of society, and the principles underlying the course of study; it will also consider the psychological principles underlying the teaching process as determining the principles of method. Open only to teachers of experience and to those who have had courses in psychology.

72s. Methods of Instruction.—This course is designed to aid teachers in the study of the principles of general methods and of the special methods used in the subjects taught. Each student will be expected to make a careful study of the methods used in at least two secondary school subjects. Considerable attention will be given to methods of teaching pupils how to study and to the use of library and reference books.

Graduate Courses.—One or more courses will be offered each summer for those who wish to undertake work toward an advanced degree. For the summer of 1915, Courses 55s and 72s are the specific ones offered, but it may be possible to arrange other courses for any who have had adequate preparation and who wish to pursue a special line of work.

In addition to the regular courses, opportunity will be given for the investigation of special problems in education. Teachers, whether working for credit or not, will be given the advice and help necessary for such investigation. If teachers who wish to do work of this kind will consult with the instructor some weeks in advance, arrangements may be made by which special material for the study may be collected.

Credit Towards Professional Certificates.—By arrangement with the State Department of Education, certain courses taken in the Summer Term may be counted toward fulfilling the requirements of the professional secondary certificate. A rotation of courses will be arranged

from year to year so as to enable teachers to secure this certificate by attendance at several sessions of the Summer Term. Courses 55s and 72s are the courses for which such credit will be given.

81s and 82s. Vocational Education.—The aim of this course is to aid in securing a more rational adjustment between education and early vocational experiences. It includes a discussion of the history and status of vocational education in the United States and Europe; pertinent lessons to be learned from foreign systems; attitude of organized labor; attitude of employers of labor; relation to manual training; legislation; experiment of private philanthropic institutions, industrial corporations, and public schools; articulation with present school system; guidance; placement; employment supervision; vacational analysis; cumulative school records; vocational guidance surveys and vocational bureaus. *Three hours a week.*

ENGLISH

Professor Gray; Professor G. A. Thompson; Professor Daggett; Associate Professor Mellett; Mr. Parry; Mr. Bliss; Mr. Clark; Mr. Keyes; Mr. Emsley; Miss Webb

Eight hours in English are required for the Bachelor of Arts, and ten hours for the Bachelor of Science degrees. These credits are obtained somewhat differently in the several colleges: (1) in the College of Arts and Sciences by taking, during the freshman year, Courses 1-2, 5-6; and during the sophomore year, Courses 9-10, or 11-12, or 27-28, or 35-36; (2) in the College of Agriculture by taking, in the freshman year, courses 7-8; in the sophomore year, Courses 3-4; in the junior year; Courses 17 and 18; (3) in the College of Technology by taking Courses 7-8; and in the sophomore year, Courses 3-4; and in the senior year Course 15.

English 5-6 or 7-8 are prerequisite, in all colleges, for courses of the sophomore year. The required courses of the freshman and sophomore years may not be postponed until the junior or senior year, without permission of the head of the department.

Elective courses in this department should be taken, so far as practicable, in the following order:

First year: Courses 29, 30.

Second year: Courses 29, 30, 27-28, perhaps 51 and 52, 35-36, 39, 40, 31.

Third year: Courses 53-54, 31 and 32, 41 and 42, 55 and 56, 13, 35-36, 37 and 38, 19 and 20, 33 and 34, 39, 40, 21, 61-62, 23-24.

Fourth year: Courses 31 and 32, 55 and 56, 13, 53 and 54, 21, 61-62, 19 and 20, perhaps 59-60, 66, 67-68, 25-26.

Students are expected to consult the head of the department, if they find it necessary to make a change.

For undergraduates only

1, 2. Public Speaking.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The work of the first semester consists of voice training by means of practice work in classes, pronunciation and enunciation, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second semester the training thus acquired will be applied to the delivery of model public orations, and especially to speeches of the students' own composition. Special attention will be given to the correction of individual fauls. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. *Once a week* throughout the year. Open only to freshmen in the College of Arts and Sciences.

3, 4. Public Speaking.—This course is entirely practical; the formal discussion of the theory of elocution is excluded. The work consists in the writing and delivery of speeches upon subjects in which the student is interested and informed. Speeches, argumentative or otherwise, will be written and delivered as if before a business corporation, a grange, an electrical engineering or other scientific society, a political organization, etc. Conferences will be held for criticism. Open only to sophomores in the Colleges of Agriculture and Technology. *One hour a week.*

5. English Composition and Rhetoric.—The object of this course is to give training in writing correct and clear English, with attention also to oral expression. The theoretical work consists of the study of the fundamental principles of good usage in English writing; and of the expository form of composition, with some attention to the narrative and descriptive forms. In illustration of the theory many selections from literature are studied. Weekly themes and monthly essays, with conferences. This course is prescribed for freshmen in the College of Arts and Sciences. *Two hours a week.*

6. English Composition and Rhetoric.—The object of this course is the same as in Course 3. The theoretical work consists of the more elementary principles of argumentation; practice in making outlines and briefs; weekly themes and monthly essays. This course is prescribed for freshmen in the College of Arts and Sciences. *Two hours a week.*

7. English Composition.—The theory and practice of composition adapted to the needs of technical students. The writing is mainly expository; weekly themes and monthly essays, with conferences. This course is prescribed for freshmen in the Colleges of Technology and Agriculture. *Three hours a week* in the College of Technology and *two hours a week* in the College of Agriculture.

8. English Composition.—The theory and practice of composition adapted to the needs of technical students. The writing is mainly argumentative, with attention to the less literary aspects of narrative and descriptive writing. Weekly themes and monthly briefs and essays, with conferences. This course is prescribed for freshmen in the Colleges of Technology and Agriculture. *Three hours a week* in the College of Technology and *two hours a week* in the College of Agriculture.

9, 10. Expository Composition.—A detailed and fairly complete study of the theory of exposition, with attention to prose style. Monthly essays and conferences. *Two hours a week.* Prerequisites, Courses 5, 6 or 7, 8.

11, 12. Argumentative Composition.—An advanced course in the theory and practice, oral and written, of argumentation. Monthly essays and conferences. *Two hours a week. One hours a week.* Prerequisites, Courses 5, 6, or 7, 8.

13. Advanced Composition.—Informal lectures on various literary forms and styles, with a large amount of writing. The object of the course is to cultivate clearness, facility, and individuality of style, and to train students to perceive and appreciate these qualities in the best books. Specialized writing, as dramatic criticism, for students in journalism.

Students looking forward to newspaper or magazine work, to a literary career, or to teaching, will find this course especially helpful.

Prerequisites: Courses 5, 6, 9, 10, or 11, 12, 29, 30. *Two hours a week.*

15. Business English.—Correspondence, mechanical details, reports, preparation of manuscript for theses, and for technical journals. Prescribed for seniors in the College of Technology. *Two hours a week.* Fall semester.

17. Composition.—This course gives practice in technical journalism and news writing, in making reports and summaries of investigation, and in the preparation of theses. Open only to juniors and seniors in the College of Agriculture. *Two hours a week.*

18. Literary Types.—Great books, typical of the several forms of literature, will be read. An endeavor will be made to cultivate an appreciation of the best, both in prose and poetry, and to acquire critical knowledge of what constitutes a great drama, a great epic, a great lyric, a great novel, etc. Open only to juniors and seniors in the College of Agriculture. *Two hours a week.*

19, 20. Debating.—Application, in this course, is made of the principles of argumentation. Briefs are prepared and the leading questions of the day debated. *Two hours a week.* Prerequisites, Courses 1, 2 or 3, 4, 5, 6, and 11, 12.

21. Public Speaking.—Forms of address. A study of persuasion applied to letters, editorials, and speeches for various occasions. Preparation of public addresses, and practice in extempore speaking. *Two hours.* Prerequisites, 1, 2, or 3, 4.

22. Oral English.—A fundamental course in voice production, diction, and interpretation of literature. Practice in reading lyric, narrative, and dramatic forms, with constant application to the requirements of public speech. *Two hours a week.* Prerequisites, 1, 2, or 3, 4.

23-24. Journalism.—This course gives training and practice in the fundamentals of newspaper writing: such as, observation or the seeing stories that have unique interest, "turning in tips," developing "news," "feature," and "human interest" stories, writing in journalistic style. A comparative study is made of the leading newspapres. *Three hours a week.*

25, 26. Journalism.—Practical newspaper work an dtechnique. *Three hours a week.* Prerequisite, Course 32.

27, 28. Practical Journalism.—This course consists in practical work in connection with student publications. *Two hours a week.*

29. History of English Literature.—An outline course, extending to the close of the sixteenth century, including extensive reading in the English classics. Lectures, assigned reading, and reports. This course is introductory to all other courses in English literature, and should be taken in the sophomore year.

Those who can elect only one course in English will probably find this course best suited to their needs. *Three hours a week.*

30. History of English Literature.—A continuation of Course 29, covering the periods from the seventeenth century to the present day. *Three hours a week.*

31. English Prose in the Eighteenth Century.—Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.*

32. English Prose in the Nineteenth Century.—Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.*

33. Shakespeare and the English Drama.—A lecture course giving a brief historical survey of the origin and development of the English drama to the time of Shakespeare, with assigned reading in the old dramatists. Introductory lectures on the life and art of Shakespeare, with a study of an early and a late comedy, and an early and a late tragedy. *Two hours a week.* Given in 1915-16 and alternate years.

34. Shakespeare.—A detailed study of three or four great tragedies of Shakespeare. *Two hours a week.* Given in 1915-16 and alternate years.

35. Elizabethan Poetry.—A study of Elizabethan non-dramatic poetry, showing its rise and development, its dominant forms and characteristics, and its relations to the life and thought of the age. *Two hours a week.* Given in 1915-16 and alternate years.

36. Elizabethan Poetry and Prose.—A continuation of Course 35. The study of Elizabethan poetry will be completed, and the large part of the semester given to the study of the prose of the period. *Two hours a week.* Given in 1915-16 and alternate years.

37, 38. Victorian Poets.—Tennyson Browning, Rossetti, and Arnold. A study of selected poems, with additional assigned reading in the poets. Special attention is given to the art of Tennyson and Browning. *Two hours a week.*

39. History of English Literature.—A lecture course giving a brief survey of the development of English literature, extending to the close of the sixteenth century. Assigned reading and reports. *Two hours a week.* Open to technical students only.

40. History of English Literature.—This course continues the work of 39, covering the periods from the sixteenth century to the present time. *Two hours a week.* Open to technical students only.

41. English Romantic Poets.—A general view of the English Romantic Movement, with some attention to the characteristics of the poetry that preceded this movement; a study of selected poems from the writings of Thompson, Collins, Gray, Cowper, and Burns. *Two hours a week.* Given in 1915-15 and alternate years.

42. English Romantic Poets.—A continuation of Course 41. Study of selected poems from the writings of Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *Two hours a week.* Given in 1914-15 and alternate years.

43. American Literature.—A lecture course giving an historical outline, with assigned reading. *Two hours a week.* Prerequisites, Courses 29 and 30.

44. American Literature.—A continuation of Course 43. *Two hours a week.*

For graduates and undergraduates

51. Old English (Anglo-Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German.

Lectures on the literature of the period 700-1000. This course is advised for those intending to teach English, and for all who wish a thorough knowledge of the language and literature. *Three hours a week.* Given in 1915-16 and alternate years.

52. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary, and archæological interests. *Three hours a week.* Prerequisite, Course 51.

53. Middle English Literature.—Elements of the grammar of Middle English; reading of the texts in Emerson's Middle English Reader. Langland's Piers Plowman is read with attention to text, metre, and literary interests. *Three hours a week.* Prerequisite, Course 51. Given in 1914-15 and alternate years.

54. Chaucer.—All of the Canterbury Tales and some of the Minor Poems are read with attention to language, metre, historical and literary interests. *Three hours a week.* Given in 1914-15 and alternate years.

55. The Novel.—A study of the development and technique of the English novel. At least eight of the greatest English and American novels will be read. *Two hours a week.*

56. The Novel.—A continuation of Course 55. *Two hours a week.*

57. Cynewulf.—Reading of The Christ and The Elene; and possibly some of the poems attributed to Cynewulf, as the Phœnix, and the Juliana, with attention to text, metre, historical and literary interests. Prerequisites, Courses 51-52. *Three hours a week.*

59, 60. The Victorian Period (1830-1900).—A study of the literary, social and scientific movements in England and America, the rise of periodical literature tractarianism; pre-Raphælitism, with special attention to Carlyle, Emerson, Newman, Matthew Arnold, Ruskin, Tennyson, Clough, Robert Browning, D. G. Rossetti, Dickens, Thackeray, George Eliot, Jane Austen, and the Brontes. *Two hours a week.*

61, 62. History of the English Drama.—Especial attention is given to the immediate predecessors and the contemporaries of Shakespeare *Two hours a week.* Given in 1914-15 and alternate years.

63. Teachers' Course in English.—A. This course is conducted in coöperation with the department of Education. It is open only to major students in English, and of these only, as a rule, to seniors and graduate students. The work is mainly practical with some theory. See Education 75 and 76. B. The aims, methods and problems of teaching English composition and literature in high school and in college. Open to seniors who expect to teach English. *Two hours a week.*

66. Poetics and Prosody.—A study of the various poetic forms, as lyric, epic, drama, and the English metres. *Two hours a week.*

67-68. The Eighteenth Century (1700-1770).—A study of the rise of prose, the essay, the magazine, the novel, and the beginnings of romanticism, with especial attention to Addison, Steele, Swift, Defoe, Pope, Johnson, Goldsmith, Gray. Lectures, assigned reading, and reports. *Two hours a week.*

Primarily for graduates

101-102. History and Theory of Literary Criticism.—*Three hours a week.*

103-104. Types of Literature.—A comparative study of various literary forms. *Three hours a week.* Prerequisite, Courses 101 and 102.

105-106. Milton and His Age.—This course is devoted to problems of form, sources, and literary influences and relations. *Two hours a week.*

107-108. Seminar.—The subject varies from year to year, and is determined by the needs of students in attendance.

Summer Term

Professor Gray; Mr. Clark; Miss Worster

1s. Courses in Preparatory English.—The work is designed for those who have entrance credits to make in this department.

a. English Composition.—The purpose of this course is to give a thorough drill in correct writing. Special attention will be given to spelling, grammar, punctuation, sentence and paragraph formation.

b. English Literature.—A careful, yet necessarily rapid study of Shakespeare's Macbeth, Milton's Lycidas, Comus, L'Allegro, and Il Penseroso, Washington's Farewell Address, Webster's First Bunker Hill Oration, and Macaulay's Life of Johnson.

5s. English Composition and Rhetoric.—The work in the course is similar to that of the full semester of the freshman year in the University. It consists of the study of text-books, discussions of principles and methods, and practice in writing. The written work, which is based largely upon the personal observations and experiences of the student, is discussed before the class in order to give practical illustration of principles and methods. Teachers will obtain from this course a familiarity with the methods of teaching English composition followed in the University, and special effort will be made to meet their needs. The text-books used will be Woolley's Hand-book of Composition, Baldwin's Composition, Gray's College Theme Tablet.

6s. Expository and Argumentative Writing.—This course is similar to that of the spring semester of the freshman year. Baldwin's Composition, Chapters VI to X inclusive, is the basis of the theoretical part of the course. Essays and conferences.

63s. Teachers' Course.—The aims, methods, and problems of teaching English composition and literature in the high school will be discussed and illustrated. Stress will be placed, this session, upon the preparation of the teacher, drill in the criticism of essays and the consideration of labor saving devices connected therewith, interest as a factor in the study of literature, development of ideas as a factor in composition, and the discussion of the important recently published articles on the teaching of English. The plan of the course is sufficiently flexible for the presentation of special topics or problems by the teachers in attendance, and so far as practicable, their problems will receive attention. This course may count two hours credit toward the master's degree.

31s. Shakespeare and the English Drama.—Lectures and discussions on Shakespeare's art. Four plays are studied in detail; and several more are required to be read. The origin and development of the English drama is outlined and illustrated by stereopticon. The Oxford Shakespeare, complete in one volume is recommended.

27s. Introduction to English Literature.—This is an outline course covering the periods from 800 to 1900. Lectures, required reading, reports, and discussions.

51s. Old English (Anglo-Saxon).—A first course, designed to introduce the student of English to the historical study of the language, and to the beginnings of English prose and poetry. Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of Old English to Modern English and Modern German. Lectures on the literature of the period 700-1000. This course is essential for teachers of English, and for all who wish a thorough knowledge of the language and literature. This course may count three hours' credit toward the master's degree. Open to graduate students and advanced undergraduates.

52s. Beowulf.—This, the oldest English epic, is read with attention to text, metre, literary and archæological interests. Prerequisite, Course 7 This course may count three hours credit toward the master's degree. Either Course 7 or Course 8 will be given, according to demand.

103s. Types of Literature.—This course is an introduction to the study of comparative literature. Great books, typical of the principal forms of literature will be read. The aim of the reading and discussions will be to cultivate an appreciation of the best and to lay the foundations for a critical knowledge of what constitutes a great epic, drama lyric, novel, etc. This course may count for three hours credit toward the master's degree. Open to graduate students, and undergraduates only by special permission. The course pre-supposes considerable knowledge of literature.

GEOLOGY

The courses in this subject are described with those in the department of Biological Chemistry

GERMAN

Professor G. W. Thompson; Assistant Professor Drummond; Mr. Bain; Mr. Floyd; Miss Kelly

For undergraduates only

1, 2. First Year German.—A course for beginners. German composition; numerous texts read; conversation. *Five hours a week.*

3, 4. Second Year German.—A course for students who have had Courses 1, 2, or equivalent. The grammar study, composition, and text reading are progressively advanced from Courses 1, 2. *Three hours a week.* Fall semester. *Two hours a week.*

5, 6. Third Year German.—A course for students who have had Courses 1, 2, 3, 4 or the equivalent. Tests include 18th century literature; advanced composition; lectures on the history of German literature. *Three hours a week.*

7, 8. Fourth Year German.—An advanced course for students who have had Courses 1, 2, 3, 4, 5, and 6, or the equivalent. Texts include 19th century literature; advanced composition with original themes; lectures on the history of German literature continued. *Three hours a week.*

These courses are carefully graded in difficulty and are to be taken in the order named.

Courses 1 and 2 are open only to students who are registered in the College of Arts and Sciences.

For the convenience of other students who wish to begin the study of German the following courses are offered:

Courses 1 and 2. A separate division for those who desire to pursue beginners' German five hours a week, or Courses 9, 10, and 11, 12 in which the work of Courses 1 and 2 may be completed in two years.

9, 10. Elementary German.—Study of grammar, composition, and easy texts, which contain a practical vocabulary. *Three hours a week.* Fall semester. *Two hours a week.*

11, 12. Continuation of Course 9, 10.—More advanced study of grammar, composition and texts. Open to students who have completed Courses 9, 10, or equivalent. *Three hours a week.* Fall semester. *Two hours a week.*

Note—Course 11, 12 is not equivalent for Course 3, 4.

14, 14. German Coversation.—*Two hours a week.*

15, 16. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week.*

For graduates and undergraduates

51, 52. Advanced Conversation and Composition.—*Two hours a week.*

53, 54. History of German Literature.—Lectures with assigned readings. *One hour a week.*

55, 56. History of the German Novel.—Lectures given in 1914-15 and alternate years. *Two hours a week.*

57, 58. History of the German Drama.—Lectures given in 1913-14 and alternate years. *Two hours a week.*

59, 60.—History of German Education.—Lectures. *One hour a week.*

Primarily for graduates

101, 102. Old High German.—Wright's Old High German Primer. Open to students whose major subject is German. *Two hours a week.*

103, 104. Gothic.—Conditions for electing this course are the same as for Course 101, 102. Wright's Gothic Primer. *Two hours a week.*

105, 106. Middle High German.—The condition for electing this course are the same as for Course 101 and 103. Wright's Middle High German Primer; translation of Middle High German texts. *Two hours a week.*

Note. Course 5, 6 may be taken by graduates who elected Course 3, 4 in their senior year.

Collateral reading is a part of all the German courses, in which the reading of simple texts is designed to increase the vocabulary and cultivate fluency of translation.

The abundance of texts now available offers so wide a choice and variation that it is deemed inexpedient to name a list of books which will be read.

Summer Term

Assistant Professor Drummond; Mr. Bain

1s. Elementary Course.—For those who wish to acquire or review the essentials of German grammar and the foundation of a German vocabulary.

2s. Second Year German.—This course is designed for students who have completed a year's work in German, or for such teachers as may wish to review their work in this department.

3s. Conversational German.—For those who have taken at least one year of German and wish to get practice in speaking and hearing German. German stories will be reproduced orally and in writing. There will also be German dictation and memorizing of German songs. Twice a week.

4s. German Literature.—A brief course of lectures covering a period of German literature. This course is designed for advanced students.

Other advanced courses in German may be substituted for Courses 2 and 4 if they seem better adapted to the needs of the students.

The following three courses are offered as graduate work leading to a degree and presuppose on the part of the student a reading and, as far as possible, speaking knowledge of the language.

5s. A Critical Study of the Classical Period of the Eighteenth Century.—Lectures, references, and discussions. *Two hours a week.*

6s. Naturalism in Germany, its Causes, Character, and Influence.—Lectures, references, and discussions. *Three hours a week.*

7s. Goethe and Faust.—An incisive study of the life of Goethe; the origin and interpretation of Faust as a work of literature. *Two hours a week.*

GREEK AND CLASSICAL ARCHAEOLOGY

Professor Huddilston

The department of Greek and Classical Archæology is arranged with the idea of presenting the several phases of Hellenic civilization. Such courses are offered as will prove serviceable not only to those pursuing

the classical languages, but to the student of average interests who, not having studied Greek in the fitting school, may desire to include in his college curriculum some work bearing on the permanent literary and art values contributed by the ancient Greeks to the civilization of both ancient and modern times.

1. Xenophon.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.*

2. Homer.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.*

3. Attic Orators.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.*

4. Greek Tragedy.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.*

Courses 7-54 offer an introduction to the literature religion, customs, art, and history, and may be taken by students who wish to devote only a year or two to Greek subjects.

5. Elementary Greek.—The declensions, conjugations; Xenophon's Anabasis. Books I-II, and daily writing of Greek based on the text. *Five hours a week.*

6. Xenophon and Homer.—Anabasis, Books III-IV; sight reading in Attic prose; selections from Homer's Iliad. *Five hours a week.*

7. Greek Private Life.—Text-book, lectures, illustrated with lantern slides and photographs; assigned reading. *Two hours a week.*

8. Greek Religion.—A study of the chief divinities in ancient Greek religion, and their relation to art and literature; lectures and assigned reading; investigation of special topics by members of the class. *Two hours a week.*

51. Greek Literature.—The history of poetry; epic, lyric, and dramatic. Types and standards of verse composition established by the ancient Greeks, and some consideration of the Greek influence upon later poetry, particularly the epic. Lectures and readings from English translations. Each student will be expected to make a special study of some one author, and in the treatment of Aeschylus, Sophocles, and Euripides, at least one play of each will be read in class, members of the class taking the several parts. This course as well as the next on prose literature, is intended to be foundational for students majoring in classics or in modern languages. *Three hours a week.* Given in 1915-16 and alternate years.

52. Greek Literature.—The history of prose literature in ancient Greece. History, oratory, and philosophy will be traced in succession. Students will be expected to do parallel reading, especially in Demosthenes and Plato. This course may be taken only in connection with Greek 51 and like the latter is intended to place the student in touch with the forces of lasting value in Greek letters. *Three hours a week.* Given in 1915-16 and alternate years.

9. Greek and Roman Civilization.—This is a course intended primarily for freshmen, but is open also to upper-class men. Credit will not be given for less than a year's work.

10. The continuation of the preceding and open only to those who have taken that course.

Three hours per week. Given in 1914-15 and in alternate years.

The course deals with the classical background of modern civilization and has nothing in common with the work in ancient history offered in the fitting schools. The purpose of the course is to gather up and present in simple and comprehensive manner the great forces that proceeded from ancient Greece and Rome and which were fashioned, together with Christianity, into the Europe of later centuries.

Such phases of the political history of these peoples will be presented as are essential for a proper understanding of the development of classical thought and the student will be directed especially to the unity of Greece and Rome as affecting and moulding the character of the later times. Much attention will be given to the power of the Roman tradition in Europe and the intellectual stimuli that issued from the literature, life and thought of the classical ages.

The permanent Greek character of the East, the effect of this upon the early centuries of Christianity, and the introduction into this situa-

tion of Mohammadanism in the 7th century A. D. will be traced, and also the later period when southern Europe was largely under the influence of Saracen and Arabian learning and life.

The last of the year's work will include some account of the fields in which classical antiquity took possession of Europe in the 13th to the 16th centuries, particularly after the fall of Constantinople, and culminating in the renaissance of Italy, France, and England.

The first semester's work will trace the rise and development of Greece and Rome as nations, and what the world was on the so-called fall of Rome.

Instruction will be given by lectures; students will keep note-books and investigate assigned topics.

Three hours per week. Given in 1914-15 and in alternate years.

11. History of the Old Testament.—This course will cover the rise and development of the Bible as a piece of literature; the vicissitudes of the written and the printed texts; and the various English translations. As far as time permits the development of the Canon will be included in the work. Lectures and assigned topics. Open to all students. *One hour a week.* Given in 1915-16 and alternate years.

12. History of the New Testament.—A continuation of Course 11. Open to all students. *One hour a week.* Given in 1915-16 and alternate years.

History of Fine Arts

There are courses extending through four semesters presenting an opportunity for the student to cover the entire field of ancient and medieval and modern art history in its various bearings on the history of Europe down to the close of the 18th century, and when taken in succession all but the first course may be counted towards an advanced degree.

Oriental, Greek, and Roman art will be given in a three hour course extending through the year and medieval and modern art will follow this for two semesters for the same number of periods.

While it is not absolutely essential that a student should have taken Courses 1 and 56 in order to be admitted to 57 and 58, it is highly desirable that a sequence should be observed and that the historical evolution of the great art epochs should be approached in such a manner as to contribute the largest educational values.

1. Art.—The history of art in ancient Egypt and western Asia, with special reference to the buildings of the Egyptians as exhibiting the best index to the history of that remarkable race. This chapter will be a foreword to the beginning of art in southeastern Europe; the Cretan and Mycenaean periods preceding the early Greek period. The history of Greek architecture and sculpture will be given down to the beginning of Athenian supremacy. The extant monuments will be studied in photographs and with the aid of the stereopticon. Lectures, note-books, text-books, and discussions. *Three hours a week.* Given in 1914-15 and alternate years.

2. Art Ideals of the Great Nations.—A course for the general student, setting forth some of the fundamentals of art development in ancient Egypt, Greece, and Rome, and in modern Italy, France, Spain, Germany, and England. Not open to students who have taken Courses 1 to 58. *One hour a week.*

3. Art Collections of Europe.—A brief discussion of the most important museums and galleries; what they are noted for, and their importance for the history of painting and sculpture. Lectures. Open to all students. *One hour a week.*

56. Art.—Greek and Roman art in their broad relations to the life of classical times; the influence of art as a dominant force in Greece and the effects of Greek culture upon Rome; the passing of Greek art to Latin soil; the notable national monuments of Rome. The existing remains in the European museums as well as the monuments still *in situ* in Italy, Sicily, Greece, and Asia Minor will be gone over with the photographs.

Each student will be expected to acquire some ability in estimating the styles of the various epochs. Lectures. *Three hours a week.* Given in 1914-15 and alternate years.

57. Medieval Art.—The history of art as influenced and modified by Christianity; Romanesque and Gothic in the West and North; the early centuries of painting in Italy and the influence of the fine arts in the 14th and 15th centuries, particularly in Florence, Siena, Ravenna, Venice, and Rome; the spirit of the Renaissance in Italy, France and Germany under the domination of Italy. Lectures, study of Photographs, and investigation of various topics. *Three hours a week.* Given in 1915-16 and alternate years.

58 Modern Art.—Art in the north of Europe and in Spain, particularly the schools of painting and palace architecture in France. The age of Louis XIV reflected at Versailles and in the Louvre; the new importance of artists as international factors at Madrid, Paris, and London; social evolution and contemporary history reflected in the successive schools of artists with the gradual ascendency of France until the time of the French Revolution. Lectures; study of pictures; special subjects for individual investigation. *Three hours a week.* Given in 1915-16 and alternate years.

61. Architecture.—A chronological survey of the development of architecture down to 1600 A. D. Greek, Roman, and early Christian architecture, their modifications in the Renaissance, and the various cathedral styles, represent the field covered in the course. Lectures, outside reading, and detailed study of the photographs in th art collection. Open to all students. *Two hours a week* for the year.

62. Architecture.—A continuation of Course 61. *Two hours a week.*

HISTORY

Professor Colvin; Associate Professor Matthews

Greek History and Roman History are given in the departments of Greek and Latin

For undergraduates only

1. Medieval History.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesiastical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. Required of major students in history. Not open to freshmen. *Three hours a week.*

2. Modern History.—Continuation of Course 1 to the present time. A rapid survey of the Reformation; the absolute monorchy in France, the French Revolution; the Napoleonic era; Europe in the nineteenth century. Not open to freshmen. *Three hours a week.*

3. History of England.—From early times to the beginning of the Stuart period. Especial attention is given to social and industrial conditions. Not open to freshmen. *Three hours a week.*

4. History of England.—Continuation of Course 3. From the beginning of the Stuart period to the present. Not open to freshmen. *Three hours a week.*

5. History of the United States.—A general course from 1848 to the present time. Open to technical students only. *Two hours a week.*

6. Recent History.—This course deals mainly with the 20th century. A special study is made of some of the most important events in the year in which the course is given. Not open to freshmen. *Two hours a week.*

7, 8. United States History and Government.—This course is open to freshmen only and credit will not be given except for the full years' work. *Three hours a week.*

9. History of the United States.—The period from 1783 to 1848. This course will begin with a brief study of Colonial history from 1750. Not open to freshmen. *Three hours a week.*

10. History of the United States.—A continuation of Course 6, from 1848 to the present time. Not open to freshmen. *Three hours a week.*

For graduates and undergraduates

51. The Renaisssance.—This course takes up the Renaissance as an intellectual and social movement in Italy and its expansion into France, England, and Germany. Students taking this course will be expected to take the course in Italian Art. *Three hours a week.*

52. The Reformation.—This course is primarily a study of the Protestant revolt, but an introductory study will be made of Waldo St. Francis of Assisi, religious conditions during the Renaissance, etc. *Three hours a week.*

53. Modern Continental Europe.—The period from the Peace of Utrecht to 1789. *Three hours a week.*

54. Modern Continental Europe.—Period of the French Revolution and Napoleon I. *Three hours a week.*

55. Modern Continental Europe.—The period since 1815. *Three hours a week.*

56, 57. Industrial and Social History of England.—The medieval manor town, guild, and foreign trade; Black death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; the industrial revolution; government control in the nineteenth century; and the growth of voluntary association. This course is continuous for the year and during the latter half is carried over into Colonial and United States social and industrial history.

58, 59. Historical Construction and Criticism.—*One hour a week. week.*

Summer Term

1s. United States History.—This course will be open to regular undergraduate students, and will cover the period since the close of the Mexican War.

2s. Modern European History.—This course will consist of a rapid review of the period 1815 to 1878, with a more detailed study from 1878 to the present time. When the class forms, if the study of another period is desired, a change may be made.

3s. Primarily for Graduates.—A course will be offered for graduate students and others who are prepared to take it. The subject will be determined by the previous work of the students who desire to elect it.

This course will be planned to fit into the scheme of graduate work to be offered in the Summer Term leading to the M. A. degree.

LATIN

PROFESSOR CHASE

For undergraduates only

1. LIVY.—Selections from Livy, History of Rome; composition, with review of Latin syntax. *Four hours a week.*

2. CICERO AND HORACE.—Cicero,, De Senectute; Horace, Odes and Epodes; Latin composition. *Four hours a week.*

Courses 1 and 2 are required of candidates for the Bachelor ofArts degree who elect Latin.

3. TACITUS.—Reading and discussion of the Agricola and Germania. *Three hours a week.*

4. TERENCE AND PLAUTUS.—The Phormio of Terence; the Captivi and Trinummus of Plautus; study of early Latin and the development of Roman comedy. *Three hours a week.*

8. TEACHERS' COURSE.—Discussion of topics connected with the teaching of Latin in secondary schools. Study of selected passages of Cæsar, Cicero, and Vergil. *One hour a week.*

For graduates and undergraduates

51. LATIN COMPOSITION.—Practice in writing Latin; study of Latin syntax. *One hour a week.*

52. LATIN COMPOSITION.—Practice in writing Latin; study of Latin rhetoric. *One hour a week.*

53. THE YOUNGER PLINY.—Reading of selected letters of Pliny; the Roman Empire. *Three hours a week.* Given in 1914-15 and alternate years.

54. HORACE AND JUVENAL.—Reading of selections from the great satirists; study of Roman satire and social life. *Three hours a week.* Given in 1914-15 and alternate years.

55. Tacitus.—Reading of the Annales and study of the reign of Tiberius. *Three hours a week.* Given in 1915-16 and alternate years.

56. The Roman Elegiac Poets.—Selections from Catullus, Tibullus, Propertius, and Ovid; study of elegiac poetry. *Three hours a week.* Given in 1915-16 and aternate years.

Primarily for graduates

57. Roman Philosophy.—Reading from Cicero's philosophical writings and from Lucretius; discussion of the leading schools of ancient philosophy. *Three hours a week.* Given in 1914-15 and alternate years.

58. A continuation of Course 57. *Three hours a week.* Given in 1914-15 and alternate years.

59. Roman Rhetoric and Oratory.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. Open to students who have taken Courses 1-4. *Three hours a week.* Given in 1915-16 and alternate years.

60. Roman Rhetoric and Oratory.—A continuation of Course 59. *Three hours a week.* Given in 1915-16 and alternate years.

61. Roman Private Life.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman every-day life. Open to students who have taken Courses 1-4. *One hour a week.* Given in 1915-16 and alternate years.

101. Roman Literature.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. Open to students who have taken Courses 1-4. *Three hours a week.* Given in 1916-17 and alternate years.

102. Roman Literature.—A continuation of Course 101. *Three hours a week.* Given in the spring semester of 1914-15 and alternate years.

103. The Latin Language.—A discussion of the fundamental principles of linguistic growth and change and of the relationship of Latin to other languages; Latin phonetics; the development of inflectional forms in Latin. Lectures and recitations. *One hour a week.* Given in 1914-15 and alternate years.

104. The Latin Language.—A continuation of 103. *One hour a week.* Given in 1915-16 and alternate years.

105. Roman Numismatics.—Practice in the use of coins as original sources for the study of history, mythology, archæology, etc. *One hour a week.* Given in 1914-15 and aternate years.

107. Sanskrit.—An elementary course in the classical language of India, with especial reference to the light it throws upon the history and grammar of the languages of Europe. *Two hours a week.* Given when asked for by a sufficient number of students.

108. Sanskrit.—A continuaion of Course 107, with more attention to the classical literature of India. *Two hours a week.*

Summer Term

1s. Caesar's Gallic War and Cicero's Speeches.—Intended primarily for secondary school teachers.

2s. College Course.—A course for students who desire college credits looking to the B. A. degree. It is the plan of the department to offer a double course that shall cover the work of an entire college semester and to vary the course from year to year, so that a student in a few summers may complete a fairly comprehensive course of college study in Latin. The choice of the subjects will rest partly with the class. We call the especial attention of secondary school teachers who have not had the advantage of complete college training in Latin to these courses, as we believe they afford an unusualy opportunity to them to increase their equipment.

3s. Graduate Study.—It is possible for a graduate student majoring in Latin to fulfill the requirements for the M. A degree in four summers. The department offers a series of advanced courses, of the value of three

semester hours' credit each, extending over a period of four years. These will give twelve semester hours' credit and, together with a thesis on some suitable Latin subject, will meet all the major requirements for the Master's degree. The courses offered, subject to modifications upon due notice, are as follows: Critical Study of Latin Literature of the Ciceronian and Augustan Periods; Roman Philosophy; Roman Rhetoric and Oratory. In addition to the major work in Latin, a graduate student will be required to take work amounting approximately to twelve semester hours in minor subjects. This work can be carried along with the Latin work and completed at the same time. It may be most conveniently divided between two subjects which bear some relation to the major work. The subjects best adapted for minors are English, History, French, Education, and German.

MATHEMATICS AND ASTRONOMY

Professor Hart; Associate Professor Willard; Assistant Professor Hamlin; Mr. Wilbur; Mr. Nordgaard; Mr. Spear; Mr. Woods

Students electing Mathematics as a major subject should expect to take Courses 1, 2, 3, 6, 7, 8, 53, 54, 56, 9, 51, 52, 61, 62, and either Courses 10 and 57 or Mechanics 7 and 8. They are also advised to take several courses in Physics.

For undergraduates only

1. Trigonometry.—The trigonometric functions; radian measure; functions of two or more angles; logarithms; solution of right and oblique triangles; trigonometric equations; inverse functions. The text-book is Lyman and Goddard's Trigonometry. *Five hours a week.* First ten weeeks.

2. Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. The text-book is Hart and Feldman's Solid Geometry. *Three hours a week.* Open to all freshmen who did not offer it for admission.

3. College Algebra.—A brief review of radicals, the theory of exponents, quadratic equations, and the binomial theorem; determinants; theory of equations. *Five hours a week.* Last eight weeks.

5. Advanced Algebra.—Determinants and the solution of higher equations. Open to students who have taken Courses 1, 2, and 3. *Three hours a week.*

6. Analytic Geometry.—The point, line, circle, and conic sections; higher plane curves; elements of solid analytic geometry. The text-book is Tanner and Allen's Brief Course in Analytic Geometry. *Five hours a week.* Open to students who have had Courses 1 and 3 and the equivalent of Course 2.

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; maxima and minima. Open to students who have taken Courses 1, 2, 3, and 6. The text-book is Granville's Differential and Integral Calculus. *Five hours a week.*

8. Calculus.—A continuation of Course 7. Integration of the elementary forms; integration between limits; integration as a summation: various methods of integration. Applications of differential and integral calculus. *Five hours a week.*

9. Spherical Trigonometry.—The elements of this subject with problems and applications to spherical astronomy.. *Two hours a week.*

10. Descriptive Astronomy.—The text-book is supplemented by informal lectures, illustrated by lantern slides, drawings of celestial objects, and work in the observatory. Open to students who have taken Courses 1, 2, 3, and, preferably, Physics 1 and Physics 4. *Three hours a week.*

11. Trigonometry for Agricultural Students.—A course essentially equivalent to Course 1. *Three hours a week.*

12. Applications of Trigonometry.—A course given for students in Agriculture and Forestry, and open to others who have taken Course 1 or 11. Further practice in the solution of problems with applications to plane surveying. *Two hours a week.*

13. Differential and Integral Calculus.—A course given for students in Chemistry and for those in the College of Arts and Sciences who desire only a brief course in this subject. *Three hours a week.*

For graduates and undergraduates

51. Advanced Analytic Geometry.—A course for students who have completed Courses 5, 6, 7, and 8. *Three hours a week.* Given in 1916-17 and alternate years.

52. Solid Analytic Geometry.—A course based upon C. Smith's Solid Geometry. *Three hours a week.* Given in 1914-15 and alternate years.

53. Advanced Calculus.—This course is varied from time to time by using different texts. Open to students who have taken Courses 6, 7, and 8. *Three hours a week.* Given in 1915-16 and alternate years.

54. Advanced Integral Calculus.—A continuation of Course 53. *Three hours a week.* Given in 1914-15 and alternate years.

56. Differential Equations.—The text-book is Murray's Differential Equations. Open to students who have taken Courses 7 and 8. *Two hours a week.*

57. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestial latitudes, and the establishment of meridian lines. The data for these problems are taken largely from the students' own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, vertical circle, astranomical transit, and zenith elescope. Open to students who have taken Courses 1, 3, 9, 10. *Two hours of recitations or lectures and two hours of observatory work a week.*

59. Practical Astronomy.—The theory and use of the sextant, universal instrument, zenith telescope, transit, and equatorial. Open to students who have taken Courses 6, 7, 8, 10, and, preferably, 57. *Three hours a week.*

60. Practical Astronomy.—A continuation of Course 59. *Three hours a week.*

61. History of Mathematics.—Lectures and recitations. *Two hours a week.* Given in 1916-17 and alternate years.

62. History of Astronomy.—Lectures and recitations. *Two hours a week.* Given in 1914-15 and alternate years.

101. Theory of Functions of a Complex Variable.—An elementary course in the treatment of analytic functions. The course includes a consideration of infinite series, both single and double, infinite products, conformal representation, and a brief application of the theory to Fourier's series, the gamma, beta, and Bessel functions, and spherical harmonies. *Three hours a week.*

102. Elliptic Functions.—The Weirstrass and Jacobi functions. A brief treatment of transformation theory, and numerous examples. *Three hours a week.*

103. Modern Analytic Geometry.—Homogeneous coördinates, ideal elements, principle of duality, and an analytic treatment of the straight line and the conics. *Three hours a week.*

104. Modern Analytic Geometry.—A continuation of Course 103. *Three hours a week.*

105. Thermodynamics.—The subject is considered more from a mathematical then from a physical standpoint. The subject is developed from fundamental principles, and is extended to systems of a more general character than those usually considered. *Three hours a week.*

106. Thermodynamics.—A continuation of Course 105. *Three hours a week.*

Summer Term

Professor Hart; Associate Professor Willard; Assistant Professor Hamlin

Courses A, B, 1, and 2 are planned to meet the needs of high school teachers who wish to review the subjects, or to study methods of teaching, as well as those of prospective candidates for admission to college who have not fully satisfied the entrance requirements in these subjects. All the teachers in this department of the Summer Term had experience in high school work before entering upon college teaching. Courses 3, 6,

7, 8, 10 should appeal to teachers of high school mathematics who wish to extend their field of mathematical knowledge or to become candidates for a degree. The remaining courses may be counted toward the bachelor's or, under suitable restrictions, toward the master's degree.

A. High School Algebra.—A course intended for teachers in preparatory schools and covering the second year's work. Special attention will be given to the methods of presenting this subject and those topics will be emphasized that are most important in preparation for college work. Candidates for admission to the University who are deficient in a part of their preparation in algebra are advised to take this course.

B. Plane Geometry.—A review of the more important theorems, with practice in the demonstration of original propositions and in the solution of numerical exercises. For teachers in preparatory schools and for candidates for admission who are slightly deficient in geometry.

2s. Solid Geometry.—This course is offered especially for the benefit of students who intend to enter college, but who have not been able to complete the requirements in solid geometry. Hart and Feldman's Solid Geometry will probably be used as the text-book, but Philips and Fisher's, Wells's and other books will be used for reference.

1s. Plane Trigonometry.—The elements of plane trigonometry, including the solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. No text-book will be required for this course, but those having logarithmic tables should bring them, and also any modern text-book on trigonometry, which may be useful for reference.

3s. College Algebra.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. The text book is Rietz and Crathorne's Advanced Algebra.

6s. Analytic Geometry.—A brief course covering the elements of this subject. The text-book is Tanner and Allen's Analytic Geometry.

7s. Differential and Integral Calculus.—A course intended for teachers in preparatory schools who wish to gain a knowledge of the elements of this subject.

8s. Integral Calculus.—The equivalent of Course 8 of the catalog. Open only to those who have previously studied the subject.

10s. Descriptive Astronomy.—Lectures accompanied by work in the observatory. The only mathematics required is an elementary knowledge of geometry and plane trigonometry. The department is well equipped with instruments and apparatus for the teaching of both descriptive and practical astronomy.

51s. Advanced Analytic Geometry, equivalent to a part of Course 51 of the catalog.

53s. Advanced Calculus, equivalent to a part of Course 53 of the catalog.

101s. Theory of Functions, equivalent to a part of Course 101 of the catalog.

58s. Observatory Work.

By suitable selection of topics, a candidate should be able to complete the work for the master's degree in four or five summer terms, the exact time depending upon his mathematical ability and previous mathematical preparation.

The department is supplied with a small but carefully selected list of mathematical models, and, for work in astronomy, has an observatory equipped with an eight inch Clark equatorial, a three inch Bamberg astronomical transit, and other instruments.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 226

PHILOSOPHY

Professor Craig

1. Evolution.—Principles of heredity, selection, survival of the fittest, eugenics. Evolution of animal behavior, mental and social evolution. The course gives a concise treatment of these topics, as a foundation for studies in psychology, sociology, and allied fields. A text-book will be used. *Three hours a week.*

2. Anthropology.—A text-book course, dealing briefly with the races of men, giving most attention to the origins of the arts and sciences, of language, and of social life and customs. *Three hours a week.*

3. Logic.—The purpose of this course is to develop clear thinking and the precise expression of thought in words. This is done largely by exercise in the solution of logical problems. Both deductive and inductive reasoning. Text-book: Creighton's Logic. *Three hours a week.*

51. Psychology.—The subjects treated in this course are the anatomy and physiology of the nervous system and sense-organs, and the psychology of sensation, perception, instinct, and habit. The methods used are recitation, discussion, introspection (self-observation), observation of others, experiment, and demonstration. Students electing this course are advised to precede or accompany it with Philosopry 1 or Biology 1; or if this be impossible, to read some good, recent book on evolution, and a similar work on human physiology. Two text-books: James's Psychology (Briefer Course); Pillsbury's Essentials of Psychology. *Three hours a week.*

52. Psychology.—A continuation of Course 51, dealing especially with the higher psychic functions, such as imagination, conception, emotion, and will. *Three hours a week.*

53. Applied Psychology.—Mental mechanisms, dreams, hypnotism, insanity. Psychology of business, of advertising. The power of art; the fine arts. Psychological aids to success in daily life. *Two hours a week.*

54. Social Psychology.—A study of the social aspects of the individual mind; of the instincts which underlie all social life; of social influence and social control; of fashion, convention, and custom; of the crowd, the mob, the public, and the deliberative assembly. *Two hours a week.*

56. Genetic Psychology.—Mental development of the individual: childhood adolescence: maturity. Text-book; Kirkpatrick's The Individual in the Making. Also lectures and outside readings. *Two hours a week.*

99. Seminar.—Reviews of current psychological literature. Social psychology is emphasized. Magazine articles or books are assigned to individual students, to be abstracted and reported upon. The student may select those topics in which he is especially interested. The work may be continued a number of semesters. *One hour a week.*

100. Seminar.—Continuation of Course 99. *One hour a week.*

101. Research.—*The number of hours a week* is not fixed, but must be arranged at the time of registration.

102. Research.—Continuation of Course 101.

PHYSICS

Professor Stevens; Associate Professor Woodman; Mr. Transue; Mr. Holmes; Mr. French

Note.—For students who are specializing in this department, the time indicated for the various laboratory courses may be extended. Two and one-half hours of laboratory work give a credit of one hour.

For undergraduates only

1. General Physics.—Recitations and lectures on the dynamics of solids, liquids, and gases; sound and light; experiments before the class; problems. Open to students who have taken Mathematics 1. *Five hours a week.*

2. General Physics.—A continuation of Course 1. Heat and electricity. *Three hours a week.*

3. Qualitative Laboratory Work.—A course in which students who are preparing to become teachers of physics are given the opportunity of performing the various class-room experiments which accompany the lectures in Courses 1 and 2. **Five hours a week.*

4. Laboratory Physics.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. Open to students who have taken either Course 1 or Course 5. **Five hours a week.*

5. General Physics.—A course covering the ground of Courses 1 and 2, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Black and Davis's Practical Physics. *Five hours a week.*

6 Meteorology.—A course covering the essential principles of the subject of meteorology, including a study of meteorological instruments and weather predictions. Milham's Meteorology is used as a text-book. *Three hours a week.*

7. Meteorology.—A continuation of Course 6, dealing with special topics, and a discussion of the results obtained at the meteorological observatory. *One hour a week* recitation; **two and one-half hours a week* laboratory.

For graduates and undergraduates

50. Optics.—Lectures and recitations in continuation of Course 1, based chiefly upon Edser's Light. Open to students who have taken Mathematics 8. *Three hours a week.* Given in 1915-16 and alternate years.

51. Mechanics and Heat.—Advanced laboratory work in continuation of Course 4. **Seven and one-half hours a week, or *five hours a week.*

52. Optics.—Advanced laboratory work in continuation of Course 4. **Seven and one-half hours a week, or *five hours a week.*

53. Electrical Measurements.—Advanced laboratory work in continuation of Course 4. **Seven and one-half hours a week.*

55. Theory of Electricity and Magneticism.—Lectures and recitations on the mathematical theory of potential, capacity, and inductance, with application to direct current phenomena. Electricity and Magnetism by Hough and Boehm is used as a text-book. *Two hours a week.*

57. Problems in Electricity.—This course can only be taken in connection with Physics 55 or Physics 59, as the problems will be selected from the work covered in those courses. *One or two hours a week.*

58. Mathematical Physics.—The application of mathematical methods to the treatment of problems in physics. The text-book is Mellor's Higher Mathematics. *Two hours a week.* Given in 1914-15 and alternate years.

59. Theory of Alternating Currents.—Continuation of Course 55 with applications to alternating current phenomena; the addition and subtraction of vector quantities; the analysis of wave forms by use of Fourier's series; the algebra of complex numbers. *Two hours a week.*

60. Sound.—Lectures and recitations in continuation of Course 1, based chiefly upon Poynting and Thomson's Sound. Open to students who have taken Mathematics 8. *Three hours a week.*

61. Heat.—An advanced course in heat in continuation of Course 2. The text-book is Edser's Heat. *Three hours a week.* Given in 1915-16 and alternate years.

62. Thermodynamics.—An elementary course in thermodynamics. The text-book is Perkins's Introduction to General Thermodynamics. *Two hours a week.*

63. Theory of Measurements.—A course of lectures covering the more important topics treated in this subject. *Two hours a week.*

64. Problems in Thermodynamics.—This course may be taken in connection with 62, by those desiring further training in the solution of practical problems in thermodynamics. The text-book will be Spangler's Notes on Thermodynamics. *One or two hours a week.*

65. Precision of Measurements.—Lectures required of juniors in mechanical engineering. *One hour a week for five weeks.*

69. Radio-Activity.—A combined lecture and laboratory course. Elementary quantitative experiments in radio-activity are performed *Two hours a week.*

Primarily for graduates

101. Special Laboratory Course.—A course open to students who have completed Courses 51, 52, and 53. A subject is assigned for original investigation, or the work of a published research is repeated. **Five hours a week.*

102. Special Laboratory Course.—A continuation of Course 101. **Seven and one-half hours a week.*

103. Radiation.—This course will include lectures and outside reading on the following topics: the electromagnetic theory of light; the development of Maxwell's equations; the application of Maxwell's equations to the reflection, refraction, and polarization of light; the radiation and absorption of a theoretical black body; the theories of emission and absorption; electric waves and light pressure. *Two hours a week.* Given in 1914-15 and alternate years.

Summer Term

Professor Stevens; Associate Professor Woodman

1s. Elementary Laboratory Course.—This includes a list of experiments which would be accepted for admission to the University of Maine. The course is especially adapted for teachers who wish to become familiar with the methods of conducting an elementary laboratory course. The complete set of apparatus is assembled in the laboratory, and full directions are given for performing each experiment.

2s. General Laboratory Course.—This corresponds to the course given in the University for all students in the College of Technology. It is based on Miller's Laboratory Manual, and includes experiments along the lines of mechanics, heat, light, sound, and electricity.

3s. College Physics.—A course based upon those parts of Kimball's College Physics which treat of mechanics, light, and sound. This course may be taken for credit only by students who have covered the ground in Physics 1.

4s. College Physics.—A course based upon those parts of Kimball's College Physics which treat of electricity and heat. This course may be taken for credit by university students who have covered the ground in Physics 2.

5s. Advanced Laboratory Courses.—These courses are offered in optics, electrical measurements, and heat. They are of a more advanced nature than those in Course 2, which is a prerequisite for them.

6s. Advanced Laboratory Course for Graduate Work.—This course will be adapted to the requirements of the students, and will be offered to such students as have completed the courses above listed. The work will be in the nature of a repetition of a published experiment, or it may be an original investigation.

7s. Advanced Physics.—A course for candidates for the master's degree will be offered in this department each summer. The course will vary for four successive terms so that the student may have an opportunity to cover a wide field. For 1915 the subject will be Theory of Measurements. The work will be based on Edser's Light, and will, when completed, count for two credits on the university books.

ROMANCE LANGUAGES

Professor Segall; Associate Professor Raggio; Mr. Kueny; Miss Beaupré

For undergraduates only

French

1. Elementary French.—Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation; Snow and Lebon, Easy French Reading. *Five hours a week.*

2. Elementary French.—A continuation of Course 1. Fraser and Squair, Abridged French Grammar; Matzke, Primer of French Pronunciation; Rambeau, French Reader; Newson's First French Book; Bruno, Le Tour de la France. *Five hours a week.*

3. Intermediate French.—Fraser and Squair, Abridged French Grammar; Lamartine, Histoire des Girondins (selections). About 500 pages of collateral reading will be assigned. Open to students who have taken Courses 1 and 2, or an equivalent. *Three hours a week.*

4. Intermediate French.—A continuation of Course 3. Fraser and Squair, Abridged French Grammar; Sand, La Mare au Diable. About 500 pages of collateral reading will be assigned. *Three hours a week.*

5. Advanced French.—Anatole France, le Crime de Sylvestre Bonnard; Modern Short Sories. Collateral reading. Open to students who have taken Courses 3 and 4, or an equivalent. *Three hours a week.*

6. Advanced French.—Lacombe, Petite histoire du peuple français; Molière, Le Misanthrope; Hugo, Ruy Blas. Collateral reading. *Two hours a week.*

7. Elementary French Conversation and Composition.—Open to students who have taken Courses 1 and 2, or an equivalent. *Two hours a week.*

8. Elementary French Conversation and Composition.—A continuation of Course 7. *Two hours a week.*

9. Advanced French Conversation and Composition.—Open to students who have taken Courses 7 and 8, or an equivalent. *Two hours a week.*

10. Advanced French Conversation and Composition.—A continuation of Course 9. *Two hours a week.*

Spanish

21. Elementary Spanish Composition and Conversation.—Hills and Ford, Spanish Grammar. *Three hours a week.*

22. Elementary Spanish Composition and Conversation.—A continuation of Course 21. Hills and Ford, Spanish Grammar; Ramsey, Elementary Spanish Reader; Dent's First Spanish Book. *Three hours a week.*

23. Intermediate Spanish.—Hills and Ford, Spanish Grammar; Pérez Escrich, Fortuna; Alarcón, El Capitán Veneno; Moratín, El sí de las niñas. About 250 pages of collateral reading will be assigned. Open to students who have taken Courses 21 and 22, or an equivalent. *Three hours a week.*

24. Intermediate Spanish.—A continuation of Course 23. Pereda, Pedro Sánchez. About 250 pages of collteral reading will be assigned. *Three hours a week.*

25. Elementary Spanish Conversation and Composition.—Open to students who have taken Courses 21 and 22, or an equivalent. *Two hours a week.*

26. Elementary Spanish Conversation and Composition.—A continuation of Course 25. *Two hours a week.*

Italian

41. Elementary Italian.—Grandgent's Italian Grammar; Pictorial Italian Course. *Three hours a week.*

42. Elementary Italian.—A continuation of Course 41. Grandgent's Italian Grammar; Bowen's First Italian Readings; I Promessi Sposi. *Three hours a week.*

For graduates and undergraduates

French

51. Introduction to the History of French Literature.—Lectures, recitations. Open to students who have taken Courses 5 and 6. *Three hours a week.*

52. Introduction to the History of French Literature.—A continuation of Course 51. *Two hours a week.*

53. Modern French Novel.—Lectures, recitations. Open to students who have taken Courses 5 and 6. *Two hours a week.* Given in 1915-16 and alternate years.

54. Modern French Novel.—A continuation of Course 53. *Two hours a week.* Given in 1915-16 and alternate years.

55. Modern French Drama.—Lectures, recitations. Open to students who have taken courses 5 and 6. *Two hours a week.* Given in 1916-17 and alternate years.

56. Modern French Drama.—A continuation of Course 55. *Two hours a week.* Given in 1914-15 and alternate years.

Italian

91. Carducci.—Text-books: Marinoni's Selections from Carducci; Mazzoni and Picciola's Antologia Carducciana. Collateral reading. Open to students who have taken Courses 41 and 42, or an equivalent. *Three hours a week.*

92. Dante.—The Inferno, and Selections from the Purgatorio and Paradiso. Text-book: Torraca's edition of Dante's La Divina Comredia. Collateral reading. Open to students who have taken Course 91. *Three hours a week.*

Primarily for graduates

French

101. Moliere.—*Two hours a week.*

102. Corneille and Racine.—*Two hours a week.*

121. Old French.—This course is intended for students who wish to acquire a reading knowledge of Old French. The laws governing the development of Popular Latin to French will also be studied. This course will consist of recitations, lectures, and collateral reading. The books used will be Bourciez' Phonétique française (Paris, Klincksieck); Paris's Extraits de la Chanson de Roland (Hachette et Cie); Clédat's edition of the Chanson de Roland (Garnier frères). Students will be expected to read outside the class during the fall and spring semesters Paris's La littérature française au moyen âge (Hachette et Cie). Some acquaintance with Latin is presupposed. *Two hours a week.*

122. Old French.—A continuation of Course 121. Paris and Langlois' Chrestomathie du moyen âge (Hachette et Cie). *Two hours a*

Summer Term

Associate Professor Raggio; Mr. Raiche; Mrs. Raiche

A. Primarily for undergraduate students

Courses 22as, 22bs, 41s, 42as, and 42bs will be offered if a sufficient number of students call for them.

1s. Elementary Course*—This course is intended for beginners. The text-book used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 1-73.

2as. Continuation of Course 1s.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.), pp. 73-128; Rambeau's French Reader (Henry Holt & Co.).

2bs. Continuation of Course 2as.†—The text-books used will be Fraser and Squair's Abridged French Grammar (D. C. Heath & Co.); Rambeau's French Reader (Henry Holt & Co.); Bruno, Le Tour de la France.

3s. Intermediate Course.—This course is intended for those who have already the required number of points for entrance French, and who desire a course in French that may be counted towards a bachelor's degree. The text books used will be Augier and Sandeau, le Gendre de M. Poirier (American Book Co.); France, le Livre de mon ami (Henry Holt & Co.); Gasc's Concise Dictionary of the French and English Languages. (Henry Holt & Co.).

4s. Continuation of Course 3s.—The text-book used will be Lamartine's Histoire des Girondins (selections). Collateral reading will be assigned.

---

* The requirements for entrance French may be met by taking Courses 1s, 2as, and 2bs in consecutive years.

† Students who already have one of the two units required for entrance French may complete their requirements during one summer term by taking Courses 2as and 2bs.

11s. Practical French Phonetics.—This course is intended for teachers who wish to concentrate their efforts upon French pronunciation. The members of the class will be made familiar with the alphabet of L'Association Phonétique Internationale, and will be expected to read, memorize, and declaim passages printed in phonetic characters. Some acquaintance with French is presupposed.

7s. Elementary French Composition and Conversation.—Open to students who have taken Courses 1s, 2as, and 2bs, or an equivalent.

8s. Advanced French Composition and Conversation.—Open to those who have taken Course 7s or an equivalent.

Spanish

21s. Elementary Spanish.—This course is intended for beginners. The text-book used will be Hills and Ford's Spanish Grammar (D. C. Heath & Co.).

22as. Elementary Spanish.—A continuation of Course 21s. The text-books used will be Hills and Ford's Spanish Grammar; Ramsey's Elementary Spanish Reader (Henry Holt & Co.); Dent's First Spanish Book (London, J. M. Dent & Co.).

22bs. Elementary Spanish.—A continuation of Course 22as. The text-books used will be the same as those used in Course 22as.

Italian

41s. Elementary Italian.—This course is intended for beginners. The text-book used will be Grandgent's Italian Grammar (D. C. Heath & Co.).

42as. Elementary Italian.—A continuation of Course 41s. The text-books used will be Grandgent's Italian Grammar; Bowen's First Italian Readings (D. C. Heath & Co.); Pictorial Italian Course (London, Modern Language Press).

42bs. Elementary Italian.—A continuation of Course 42as. The text-books used will be the same as those used in Course 42as with the addition of Manzoni's I Promessi Sposi (D. C. Heath & Co.).

B. Primarily for graduate students

French

101s. Molière.—The classic period. Given in 1913.

102s. Voltaire.—The revolutionary period. Given in 1914.

103s. Victor Hugo.—The romantic period. Given in 1915.

104s. Rabelais.—The period of the Renaissance and Reformation. Given in 1916.

121s. Old French.—In this course the aim is the acquisition of a reading knowledge of Old French. The laws governing the development of Popular Latin to French will also be studied. The books used will be Bourciez' Phonétique française (Paris, Klinchsieck); Paris's Extraits de la Chanson de Roland (Hachette et Cie); Clédat's edition of the Chanson de Roland (Garnier frères); Paris and Langlois's Chrestomathie du moyen âge (Hachette et Cie). Students will be expected to read outside the class Paris's La Littérature française au moyen âge (Hachette et Cie). This course is to extend throughout three consecutive summer terms.

In 1915 the course will consist of lectures introductory to the study of Old French phonology, and the reading of the Chanson de Roland in the two editions above mentioned. Some acquaintance with Latin is presupposed.

Italian

91s. Dante, La Divina Commedia.—L'Inferno. Given in 1916.

For graduate courses in French the prerequisites consist of Courses 1, 2, 3, 4, 5, and 6, or an equivalent, and a general introductory course in the history of French literature. Students who have not had the latter course will be required to make up the deficiency by means of assigned outside reading.

Candidates for the master's degree in French will take all the French courses in group B, and, besides, Courses 11s, 7s, and 8s in group A. Candidates for the master's degree in Romance Languages will take all the courses in group B, and in addition 21s, 22as, and 22bs, or 41s, 42as, and 42bs.

COLLEGE OF LAW

FACULTY OF INSTRUCTION

WILLIAM EMANUEL WALZ, A. M., LL. B., Litt. D.
Dean *Professor of Law*

EDGAR MYRICK SIMPSON, A. B. *Professor of Law*

GEORGE HENRY WORSTER, LL. M. *Associate Professor of Law*

BARTLETT BROOKS, A. B., LL. B. *Assistant Professor of Law*

LUCILIUS ALONZO EMERY, A. M., LL. D., Ex-Chief Justice of the Supreme Judicial Court of Maine
Lecturer on Roman Law and Probate Law

LOUIS CARVER SOUTHARD, M. S., LL. D., Member of the Massachusetts Bar and of the United States Supreme Court Bar
Lecturer on Medico-Legal Relations

EDWARD HARWARD BLAKE, LL. B., LL. D.
Lecturer on Admiralty Law

ISAAC WATSON DYER, A. B.
Lecturer on Federal Jurisdiction and Procedure, and on Private Corporations

JOHN ROGERS MASON, A. M., LL. B. *Lecturer on Bankruptcy Law*

WILLIAM BRIDGHAM PIERCE, B. M. E.
Resident Lecturer on Common Law Pleading and Maine Practice

HENRY BURT MONTAGUE, LL. M.
Lecturer on Practice and History of Law

GENERAL INFORMATION

The College of Law was opened to students in 1898. It occupies the Isaac H. Merrill building, now Stewart Hall, purchased by the University in 1911, corner Union and State Streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains over 4,500 volumes, including the reports of the Federal Courts, and of the Supreme Courts of the United States, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and Ohio; the Court of Appeals of New York; the New York Common Law and Chancery Reports; the American Decisions, American Reports, and American State Reports; the complete National Reporter System; the Lawyers' Reports Annotated; the English Reports, full verbatim reprint; the English Ruling cases; and the American Digest; all the important law Encyclopaedias; and a considerable number of text-books.

Admission

The College of Law admits college graduates and such graduates of secondary institutions as are able to present fourteen units obtained in an approved school. For further information as to admission see page 54.

Students from law offices, otherwise qualified, are admitted to advanced entrance requirements are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices, otherwise qualified, are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the curriculum.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, on presentation of their certificates of admission to the bar, at the beginning of the fall term, while graduate students may follow a curriculum leading to the degree of Master of Laws.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

College of Law

Methods of Instruction

The College is not committed exclusively to any one method of instruction, but the case system is consistently used in all the subjects of the law for which good case-books have been provided, and the great cases of the law, the land marks of legal development, form the basis of the recitations. The College of Law recognizes the great value of lectures by able men, and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle" may, perhaps, adequately indicate the stand-point of the College in the matter of method.

Particular stress is placed upon the practice court, which is held once a week as a part of the work of the College, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs summarizing the points involved and the authorities cited are submitted to the presiding judge.

The aim and spirit of the College are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Curriculum

The curriculum covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $70, $23.33 at the beginning of each term, payable in advance. Of this sum $10 is a library charge. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at prices ranging from $5 to $7 a week.

Degrees

At the completion of the three years curriculum, the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed

graduate work in residence, including the presentation of a satisfactory thesis and examination at the College, the degree of Master of Laws is granted.

Attorneys at law who have been actively engaged in practice at the bar for not less than five years, and attorneys who hold a college degree and have practised for not less than two years, may, on presentation of a recommendation from one of the justices of the highest court of their state, be also admitted to the curriculum leading to the Master's degree.

COURSES OF INSTRUCTION

1. Admiralty.—A course of lectures. *One hour a week.* Spring term. Mr. Blake.

2. Agency.—Text-book, Huffcut's Cases on Agency. *Three hours a week.* Spring term. Associate Professor Worster.

3. Bankruptcy.—Lectures. *Two hours a week.* Winter term. Mr. Mason.

4. Brief Making and the Use of Law Books.—Text-book, Brief Making and the Use of Law Books. *One hour a week.* Fall term. Professor Walz.

5. Carriers.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. Professor Simpson.

6. Carriers.—A continuation of Course 5. *Three hours a week.* Winter term. Professor Simpson.

7. Common Law Pleadings.—Lectures. *Two hours a week.* Winter term. Mr. Pierce.

8. Common Law Pleading.—A continuation of Course 7. *One hour a week.* Spring term. Mr. Pierce.

9. Conflict of Laws.—Dwyer's Cases. *Three hours a week.* Spring term. Professor Simpson.

10. Constitutional Law.—Boyd's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

11. Contracts.—Keener's Cases on Contracts. *Four hours a week.* Fall term. Assistant Professor Brooks.

12. Contracts.—A continuation of Course 11. *Three hours a week.* Winter term. Assistant Professor Brooks.

13. Contracts.—A continuation of Course 12. *Two hours a week.* Spring term. Assistant Professor Brooks.

14. Criminal Law.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. Professor Simpson.

15. Criminal Law.—Beale's Cases on Chiminal Law. *Three hours a week.* Spring term. Professor Simpson.

16. Cross-Examination.—Lectures. Mr. ————

17. Damages.—Beal's Cases on Damages. *Three hours a week* Winter term. Associate Professor Worster.

18. Domestic Relations. Smith's Cases on Persons. *Three hours a week.* Fall term. Professor Simpson.

19. Equity Jurisprudence.—Bispham on Equity Jurisprudence, and Shepard's Cases on Equity. *Four hours a week.* Fall term. Professor Walz.

20. Equity Jurisprudence.—A continuation of Course 19. *Three hours a week.* Winter term. Professor Walz.

21. Equity Pleading.—Shipman on Equity Pleading. *Three hours a week.* Spring term. Assistant Professor Brooks.

22. Evidence.—Thayer's Cases. *Four hours a week.* Fall term. Professor Simpson.

23. Evidence.—A continuation of Course 22. *Three hours a week.* Winter term. Professor Simpson.

24. Executors and Administrators.—Lectures. *One hour a week.* Spring term. Professor Simpson.

25. Federal Courts.—Lectures. *One hour a week.* Spring term. Professor Walz.

26. Federal Jurisdiction and Procedure.—Lectures. Mr. Dyer.

27. General Review.—Gardner's Review. *One hour a week.* Fall term. Professor Walz.

28. General Review.—Gardner's Review. *One hour a week.* Winter term. Professor Walz.

29. General Review.—Gardner's Review. *One hour a week.* Spring term. Professor Walz.

30. History of Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

31. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

32. International Law.—Lectures. *One hour a week.* Fall term. Professor Walz.

33. Legal Ethics.—Code of American Bar Association. *One hour a week.* Spring term. Professor Walz.

34. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Pierce.

35. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

36. Municipal Corporations.—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

37. Negotiable Paper.—Colson-Huffcut on Negotiable Paper. *Two hours a week.* Winter term. Assistant Professor Brooks.

38. Negotiable Paper.—A continuation of Course 37. *Three hours a week.* Spring term. Assistant Professor Brooks.

39. Partnership.—Ames's Cases. *Two hours a week.* Winter term Professor Walz.

40. Partnership.—Ames's Cases. *Two hours a week.* Spring term. Professor Walz.

41. Private Corporations.—Wilgus's Cases. *Four hours a week.* Fall term. Associate Professor Worster.

42. Private Corporations.—A continuation of Course 41. *Three hours a week.* Winter term. Associate Professor Worster.

43. Private Corporations.—Lectures. Mr. Dyer.

44. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

45. Real Property.—Tiffany on Real Property. *Four hours a week.* Fall term. Professor Simpson.

46. Real Property.—A continuation of Course 45. *Three hours a week.* Winter term. Professor Simpson.

47. Real Property.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. Professor Simpson.

48. Roman Law.—Lectures. *About ten hours.* Spring term. Ex-Chief Justice Emery.

49. Sales.—Burdick's Cases. *Two hours a week.* Fall term. Associate Professor Worster.

50. Sales.—A continuation of Course 49. *Two hours a week.* Winter term. Associate Professor Worster.

51. Suretyship.—Ames's Cases. *Two hours a week.* Fall term. Associate Professor Worster.

52. Suretyship.—A continuation of Course 51. *Two hours a week.* Winter term. Associate Professor Worster.

53. Torts.—Ames and Smith's Cases. *Four hours a week.* Fall term. Professor Walz.

54. Torts.—A continuation of Course 53. *Three hours a week.* Winter term. Professor Walz.

55. Torts.—A continuation of Course 54. *Two hours a week.* Spring term. Professor Walz.

56. What to do in Court.—Lectures. *About ten hours.* Fall or spring term. Ex-Chief Justice Emery.

57. Wills.—Chaplin's Cases. *Three hours a week.* Spring term. Associate Professor Worster.

THE COLLEGE OF TECHNOLOGY

FACULTY OF INSTRUCTION

HAROLD SHERBURNE BOARDMAN, C. E.
Professor of Civil Engineering
DEAN
*ARTHUR CRAWFORD JEWETT, S. B.
Professor of Mechanical Engineering
CHARLES PARTRIDGE WESTON, C. E., M. A.
Professor of Mechanics and Drawing
CHARLES BARTO BROWN, C. E.
Professor of Railroad Engineering
RALPH HARPER McKEE, PH. D. *Professor of Chemistry*
WILLIAM EDWARD BARROWS, E. E.
Professor of Electrical Engineering
CHARLES WILSON EASLEY, PH. D.
Associate Professor of Chemistry
PAUL LEONARD BEAN, C. E.
Associate Professor of Civil Engineering
ALBERT THEODORE CHILDS, E. E.
Associate Professor of Electrical Engineering
ARCHER LEWIS GROVER, B. S. *Associate Professor of Drawing*
JULIUS ERNEST KAULFUSS, B. S.
Associate Professor of Civil Engineering
WILLIAM AMBROSE JARRETT, PHARM. D.
Associate Professor of Pharmacy
LLOYD MEEKS BURGHART, M. A. *Assistant Professor of Chemistry*
CARL HENRY LEKBERG, B. S.
Assistant Professor of Mechanical Engineering

*Absent on leave.

LAWRENCE BOYLSTON CHAPMAN, B. Sc.
Assistant Professor of Mechanical Engineering
RAYMOND HARMON ASHLEY, PH. D.
Assistant Professor of Chemistry
ALBERT GUY DURGIN, M. S. *Assistant Professor of Chemistry*
ALPHEUS CROSBY LYON, B. S.
Assistant Professor of Civil Engineering
EVERETT WILLARD DAVEE *Instructor in Wood and Iron Work*
CHARLES JENKINS CARTER *Instructor in Machine Tool Work*
WALTER ELWOOD FARNHAM *Instructor in Drawing*
ERNEST CONANT CHESWELL *Instructor in Electrical Engineering*
EARLE OVANDO WHITTIER, M. S. *Instructor in Chemistry*
JOSEPH NEWELL STEPHENSON, M. S. *Instructor in Chemistry*
ELWOOD WHITNEY JENNISON, B. S.
Instructor in Mechanical Engineering

CHESTER EARLE ANDREWS, M. S. *Instructor in Chemistry*
TIMOTHY JEREMIAH CONNORS, JR., PHARM. D.
Instructor in Pharmacy
JAMES JOHN DONEGAN, PH. B. *Instructor in Civil Engineering*
WILLIAM GORDON JAMES, B. S.
Instructor in Electrical Engineering
HAROLD EDMANDS JENKS, B. S. *Instructor in Civil Engineering*
ARTHUR WHITING LEIGHTON, *Instructor in Drawing*
ARTHUR BENTON LEONARD, M. E.
Instructor in Mechanical Engineering

---

*Absent on leave from September 1, 1914, to September 1, 1915.

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, in various branches of engineering, and in pharmacy. The number of hours required for graduation in this college is one hundred and fifty. In such technical curricula it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the curricula described below is given a tabulated statement of the subjects pursued and the amount of work required. The College comprises:

Chemical Engineering Curriculum
Chemistry Curriculum
Civil Engineering Curriculum
Electrical Engineering Curriculum
Mechanical Engineering Curriculum
Pharmacy Curricula

At graduation in any of these curricula the student receives the degree of Bachelor of Science; except for short curricula in pharmacy where the degrees of Graduate in Pharmacy or Pharmaceutical Chemist are conferred The diploma indicates which curriculum has been completed.

Graduation Requirements

The College of Technology has the following requirements for graduation:

1. English, one year, five hours a week, or the equivalent.
2. Mathematics, two years, five hours a week, except in Chemistry and Chemical Engineering where one and two-fifths years are required, and Pharmacy where one year is required.
3. Science (biology, chemistry, or physics), one year, five hours a week, of which time an important part must be occupied with laboratory work.
4. Language (French and German), the equivalent of one college year of each, five hours a week taken in college or preparatory school. Candidates offering one full year of the second language for admission must take the equivalent of a five hour year in that language in college. A student in German or French must receive at least two credits in the subject to count it toward a degree.
5. Military Science and Tactics, two years, three hours a week.
6. Physical Training, one year, three hours a week.

Chemical Engineering Curriculum

In view of the rapid development of the application of chemistry in manufacturing, this curriculum is offered to furnish training in engineering together with specialization in chemistry. The first two years are almost identical with those under the Chemistry curriculum, but in the junior and senior years the student takes the fundamental courses in mechanical and electrical engineering, where, in the Chemistry curriculum, the student takes subjects having a biological aspect. The training

is thus essentially chemical, and the graduates are primarily chemists having a good knowledge of mechanical and electrical engineering. Such students will be prepared to enter the profession of chemical engineering and to occupy positions in manufacturing establishments such as metallurgical works, bleacheries, dye houses, chemical plants, gas works, sugar refineries, pulp and paper mills, etc.

Pulp and Paper Chemistry

Students wishing to specialize in pulp and paper work will substitute in part for courses Chemistry 20, 61, 62, 75, 76, 104 and 105 given below courses in pulp and paper chemistry (Chemistry 80 to 89), given by this department, a course on wood identification (Biology 17) and courses in forestry (Forestry 2 and 9).

Students wishing to specialize in pulp and paper work should consult the separately published description of this work. This can be had on application to the Registrar or to the department of Chemistry.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Chemistry 2 or 4	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 3, *6	2	Drawing 2, *6	2
English 5	3	English 6	3
German 1 or French 3	3	German 2 or French 4	2
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Chemistry 11, †10	5	Chemistry 60, †10	5
English 3	1	Chemistry 52, 3 and †4	5
Mathematics 13	3	English 4	1
Mechanical Engineering 3, *4	1½	Military 1, *3	1
Military 1, *3	1	Modern Language	2
Modern language	3	Physics 2	3
Physics 1	5	Physics 4, *5	2
	19½		19

JUNIOR YEAR

Chemistry 53	3	Chemistry 72	2
Chemistry 63, †8	4	Chemistry 64, †4	2
Chemistry 71	3	Chemistry 62, †4	2
Chemistry 17, †4	2	Chemistry 74, †6	3
Chemistry 75	2	Chemistry 20, †4	2
Mechanical Engineering 77, †3	1½	Mechanical Engineering 30†	2
Physics 53, *7½	3	Mechanical Engineering 6, *4	1½
	18½	Electrical Engineering 36	2
		Elective	1
			17½

SENIOR YEAR

Chemistry 77	2	Chemistry 78	2
Chemistry 101	3	Chemistry 98, †10	5
Chemistry 57, †6	3	Chemistry 58, †2	1
Chemistry 105 or Geology 3	2	Chemistry 76	2
		Chemistry 104, †8	4
Electrical Engineering 31	2	Elective	3
English 15	2		17
English 29	2		
Elective	2		
	18		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Chemical Engineer.

Chemistry Curriculum

This curriculum is designed to give the student not only a thorough technical training, but also a breadth of education which will enable him readily to undertake the great variety of problems which naturally present themselves to a chemist. It differs from the Chemical Engineering curriculum in that in the last two years the student takes courses having a biological aspect (bacteriology, biological chemistry, and agricultural analysis) rather than those of an engineering type. The curriculum is a broad one and, when completed, it prepares the student to teach, or for the profession of chemist in experiment stations, food laboratories, chemical, fertilizer and tanning plants; metallurgical, rubber and electrical machinery manufactories; and the general consulting and analytical work of a professional chemist.

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Chemistry 2 or 4	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 5	3	English 6	3
French 3 or German 1	3	French 4 or German 2	2
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Chemistry 11, †10	5	Chemistry 60, †10	5
Chemistry 17, †4	2	Chemistry 52, 3 and †4	5
English 3	1	English 4	1
Mathematics 13	3	Modern Language	2
Modern Language	3	Military 1, *3	1
Military 1, *3	1	Physics 2	3
Physics 1	5	Physics 4, *5	2
	20		19

JUNIOR YEAR

Biological Chemistry 1	5	Agricultural Chemistry 4, †10	5
Chemistry 53	3	Bacteriology 1, †6	3
Chemistry 71	3	Chemistry 74, †6	3
Chemistry 75	2	Chemistry 72	2
Chemistry 63, †8	4	Modern Language	2
Modern Language	3	Elective	4
	20		19

SENIOR YEAR

Chemistry 57, †6	3	Chemistry 78	2
Chemistry 101	3	Chemistry 98, †10	5
Chemistry 77	2	Chemistry 76	2
Chemistry 61, †4	2	Chemistry 58, †2	1
Chemistry 105 or Geology 3	2	Chemistry 104, †8	4
English 15	2	Elective	3
Elective	3		17
	17		

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of

Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis, and proofs of professional work, he may receive the degree of Chemical Engineer.

Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college curriculum to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily small. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The endeavor is made to impress upon the mind of the student that the granting of his bachelor's degree does not make him an engineer. It simply indicates that he has received the mental technical training which will fit him to follow the profession, and that he must begin at the bottom of the ladder of practice in order to obtain experience and judgment, without which he can never become successful.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and those engaged in practical work. These lectures tend to increase the interest of the student and to bring him into touch with men outside of his own institution.

The work of the first year is the same for all engineering students, especial attention being paid to mathematics and English. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased, until the last year when it is nearly all professional. At the beginning of the fourth year an opportunity is offered to specialize slightly along one of three lines. The first, called Option 1, consists of work in hydraulic engineering and electrical transmission, the second, Option 2, consists of work in railroad engineering, while Option 3 includes work in both railroad and highway engineering.

The following outline constitutes the regular four years curriculum. Certain general subjects which are given as requirements may, on presentation of reasons satisfactory to the head of the department, be omitted and others substituted.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Chemistry 2	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 5	3	English 6	3
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	18½		19

Sophomore Year

Civil Engineering 1, 5	2½	Civil Engineering 2, 4	2
Drawing 3, *6	2	Civil Engineering 6, 8	3
English 3	1	Drawing 4, *6	2
Mathematics 7	5	English 4	1
Military 1, *3	1	Mathematics 8	5
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
	19½	Physics 2	3
		Physics 4, *5	2
			21

Junior Year

Civil Engineering 25	2	Civil Engineering 20	2
Civil Engineering 21, 23, *6	2	Civil Engineering 22	2
Civil Engineering 29	2	Civil Engineering 26	3
Economics 1b	2	Civil Engineering 28	3
Geology 6, ?	2	Economics 2b	2
Mechanics 51	5	Mechanics 52	5
Mathematics 57	3	Mechanical Engineering 74, †2	1
Physics 51, *2½	1		18
	19	*Civil Engineering 24	2

*Taken after Commencement

SENIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Civil Engineering 57	3	Civil Engineering 58	3
Civil Engineering 67	1	Civil Engineering 60	2
Civil Engineering 59, †9	4½	Civil Engineering 62, †6	3
Civil Engineering 55 and 51 (Option 1)	4	Civil Engineering 52 and Electrical Engineering 42 (Option 1)	5
Civil Engineering 63 and 53 (Option 2)	4	Civil Engineering 64 and 66 (Options 2 and 3)	5
Civil Engineering 69 and 53 (Option 3)	4	Civil Engineering 70	1
History 5	2	Economics 60	3
English Eh 31	2		
	16½		17

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

Electrical Engineering Curriculum

This curriculum is intended to provide the student with a thorough understanding of the underlying principles of electrical engineering and to develop an ability to solve problems of an engineering nature from commercial as well as technical premises. To accomplish this, the student first studies the various electrical laws and methods of electrical measurements and correlates them with various laws previously assimilated in the study of physics and mathematics. These studies are followed by more advanced courses involving the fundamental electrical laws and theories and showing their application to the design, operation, and performance of electrical apparatus such as is used in the generation of electrical energy or in transforming electrical energy into mechanical energy for the various commercial requirements.

The methods of instruction consist of recitations, lectures, problems, laboratory tests, and drawing room work in design. It is the endeavor of the curriculum to acquaint the student with contempory engineering practice and, by persistent association of abstract analysis with practical problems, to equip him with the fundamentals of a successful career. Stress is laid upon the systematic reading of technical periodidcals and the acquirement of a reference library. Effort is made to have lectures by active engineers and alumni following their profession, thus bringing the student into more intimate contact with the engineering world.

In addition to the purely electrical subjects, the student takes the customary work in mathematics, physics, mechanics, shop, drawing, and allied engineering courses, together with the cultural subjects enumerated below.

The following courses are offered in the junior and senior years, three of which are required for a degree:—

Ee. 54.	Electrical railway engineering	2
Ee. 51.	Illuminating engineering	2
Ee. 53.	Telephone engineering	2
Ps 55.	Theory of electricity and magnetism	2
Me. 94.	Hydraulic Machinery	2

The equipment of the electrical laboratory has been developed to parallel practical conditions, and consists essentially of a motor-generator substation, composed of a 45 h. p. 2300 volt 3-phase synchronous motor direct connected to a 20 kw. compound inter-pole D. C. generator equipped with a Tirrill regulator and a 30 kw. three-phase 110 volt alternator. Completing this set is a belted exciter and a five panel slate switch board equipped with the necessary instruments and switching devices in accordance with modern practice. In addition to the above apparatus the equipment consists of a 20 kw. converter substation and belted alternating current motors driving direct and alternating current generators. In addition to voltmeters, ammeters, and wattmeters for both direct and alternating current, the equipment includes circuit breakers, various types of transformers, three 7 1-2 kilowatt special auto-transformers giving variable pressure for experimental work, and voltages for operating two and three-phase rotary converters, a self-starting rotary converter, a three-phase generator, a three-phase revolving field synchronous motor, a three-phase variable speed induction motor, a single-phase synchronous motor, a single-phase self-starting induction motor, direct current generators and motors, laboratory telephone equipment, and a Leeds and Northrup potentiometer.

Requirements for Graduation

Freshman Year

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Chemistry 2	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 5	3	English 6	3
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	18½		19

Sophomore Year

Electricity & Magnetism 1	2	Electricity & Magnetism 2	2
English 3	1	English 4	1
Modern Language	3	Modern Language	2
Mathematics 7	5	Mathematics 8	5
Physics 1	5	Physics 2	3
Drawing 3, *6	2	Physics Laboratory 4, *5	2
Military 1, *3	1	Mechanical Eng. 56	3
	19	Drawing 4, *6	2
		Military 1, *3	1
			21

Junior Year

Elements of Electrical Engineering 5	3	Elements of Electrical Engineering, Ee 6	3
Illuminating Engineering 51 or	2	Electrical Laboratory, Ee 8, †4	2
Electricity & Magnetism, Ps. 55		Machine Work, Me 10, *4	1½
Machine Work, Me. 9, *4	1½	Machine Design, Me 66	3
Plane Surveying, Ce. 3	2	Steam Engineering, Me 80	3
Field Work, Ce 4, *6	½	Mechanics, Md 52	5
Mechanics, Md 51	5	Money & Banking, Ec 2b	2
Electrical Measurement, Ps. 53, *7½	3		19½
Political Economy, Ec 1	2		
	19		

193

SENIOR YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Alternating Currents, Ee 9 ...	3	Advanced Alternating Currents, Ee 52	2
Electrical Design, Ee 11	2	Electrical Transmission, Ee 58	2
Design of Electrical Machinery, Ee 13 †4	2	Technical Reviews, Ee 12 ...	1
Electrical Laboratory, Ee 15 †4	2	Electrical Laboratory, Ee 16 †4	2
Telephone Engineering, Ee 53 or	2	Electrical Eng. Practice, Ee 18, *3	1
Electricity and Magnetism, Ps 59		Electric Railway Eng'g, Ee 54 or	2
Steam Engineering, Me 83 ...	3	Hydraulic Machinery, Me 94	1½
Mechanical Laboratory, Me 77 †3	1½	Electric Power Plant Eng'g Ee 56	2
Foundations, Ce 33	1	Business Law, Ec 60	3
Hydraulics, Ce 35	2		
	18½		14½ or 15

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all works involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power; the equipment of railways, and similar work.

The Mechanical Engineering curriculum is arranged to fit men as well as possible in four years' time to enter any of these lines of work. It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which

are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught mainly by recitations, based upon carefully chosen texts which are supplemented or brought down to date, where necessary, by explanations or illustrative examples on the part of the instructor. Numerous problems are assigned for work outside the class-room to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation, and testing of apparatus by direct contact with it. In the drawing rooms, application of theories to work in design is taught, together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice in the electrical laboratory. Sufficient time is devoted to recitation and field work in surveying to give familiarity with instruments and methods. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

Requirements for Graduation

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Chemistry 2	3
Chemistry 5, †4	2	Chemistry 6, †4	2
Drawing 1, *6	2	Drawing 2, *6	2
English 3	3	English 6	3
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Modern Language	3	Modern Language	2
Physical Training *2	½	Physical Training *2	1
	18½		19

SOPHOMORE YEAR

Subject	Hours	Subject	Hours
Drawing 3, *6	2	Drawing 4, *6	2
English 3	1	English 4	1
Mathematics 7	5	Mathematics 8	5
Mechanical Engineering 1, *6	2	Mechanical Engineering 6, *4	1½
Military 1, *3	1	Mechanical Engineering 56	3
Modern Language	3	Military 1, *3	1
Physics 1	5	Modern Language	2
		Physics 2	3
	19	Physics 4, *5	2
			20½

JUNIOR YEAR

Mechanical Engineering 57	1	Mechanical Engineering 8, *6	2
Mechanical Engineering 7, *6	2	Mechanical Engineering 66	3
Mechanical Engineering 61	2	Mechanical Engineering 80	3
Mechanical Engineering 59, *4	1½	Mechanical Engineering 70, †2	1
Civil Engineering 3	2	Mechanical Engineering 64b, *3	1
Civil Engineering 5	½	Electrical Engineering 30	2
Mechanics 1	5	Mechanical Engineering 64a	1
Physics 51, *5	2	Mechanics 52	5
Economics 1a	2		
Physics 65	½		18
	18½		

SENIOR YEAR

Mechanical Engineering 83	3	Mechanical Engineering 68	1½
Mechanical Engineering 89, *6	2	Mechanical Engineering 72, †5	2½
Mechanical Engineering 71, †4	2	Mechanical Engineering 84	2
Mechanical Engineering 67, *6	2	Mechanical Engineering 88, *6	2
Civil Engineering 33	1	*Mechanical Engineering 94	1½
Civil Engineering 35	2	Mechanical Engineering 92	1
Electrical Engineering 31	2	*Economics 60	3
Electrical Engineering 33, †4	2	Electrical Engineering 32	2
Mechanical Engineering 99	2	Electrictl Engineering 34, †2	1
English	2	Thesis	
	20		16½

*Substitution may be offered for this course if approved by the major instructor.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

Pharmacy Curricula

The department of Pharmacy offers two curricula, one of four years and one of two years.

The four years curriculum is offered in response to a demand for a combined collegiate and technical training for those who design to practice pharmacy. It aims therefore to combine general culture studies with a training in those sciences fundamental to technical pharmacy, to the end that the pharmacist may be equipped culturally and technically to fulfill the increased demands and responsibilities of his exacting calling. Hence, this curriculum includes the appropriate sciences and laboratory courses, it also includes cultural courses in modern languages, history, philosophy, and economics. While in the latter three subjects particular courses are not specified, a minimum number and proper sequence of such courses are required.

Those who intend to prepare for pharmaceutical work are urged to consider carefully the superior advantages of this curriculum. The increasing importance of the chemical, biological, and sanitary sciences, and of the pharmacist's relation to them, emphasized by the era of food and drug legislation now upon us, points out at once the path of new duty and of enlarged opportunity to those fitted to enter. To the unfit, the new duty remains, without the enlarged opportunity.

Instruction in pharmaceutical studies is given by lectures, recitations, and tests, supplemented by work in the laboratories of chemistry, biology, and pharmacy. Thirty credits are required for graduation.

The library contains valuable reference literature in chemistry, pharmacy, and allied sciences, and the leading scientific and technical journals.

Requirements for Graduation, Four Years Curriculum

FRESHMAN YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 2	2	Chemistry 2	3
Chemistry 3, †4	2	Chemistry 6, †4	2
English 5	4	English 6	4
French 3 or German 2	3	French 4 or German 1b	2
Mathematics 1 & 3	5	Mathematics 6	5
Military 1, *3	1	Military 1, *3	1
Physical Training *2	½	Physical Training *2	1
	17½		18

SOPHOMORE YEAR

Biology 1	4	Biology 2	4
Chemistry 11, †10	5	Chemistry 52	5
English 3	1	English 4	1
Military 2, *3	1	Military 2, *3	1
Modern Language	3	Modern Language	2
Physics 1	5	Physics 2	3
		Physics 4, *5	2
	19		18

JUNIOR YEAR

Bacteriology 2	1	Bacteriology 1, †6	3
Biological Chemistry 1	5	Chemistry 60, †10	5
Biology 15	3	Laboratory Biological Chemistry 2, †4	2
Chemistry 53	3	Pharmacy 2	4
Pharmacy 13	3	Pharmacy 16, †8	4
Pharmacy 7	2	Pharmacy 4	2
Pharmacy 9	2		
	19		20

SENIOR YEAR

Pharmacy 11	2	Pharmacy 54	1
Pharmacy 17, †10	5	Pharmacy 14	5
Chemistry 61, †4	2	Pharmacy 18, †16	8
Pharmacy 3	3	Pharmacy 20	3
Elective	3	Pharmacy 58	2
Chemistry 65, †2	1		
Chemistry 41, †8	4		19
	20		

From courses in history, philosophy, and economics, a total of at least five hours must be chosen.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one additional year's prescribed work in residence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

Two Years Curriculum

This curriculum is designed for those who, for lack of time or for other reasons, are unable to take the curriculum of four years. The more general educational studies of the full curriculum are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The curriculum corresponds, in general, to the usual full curriculum of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this curriculum does not warrant extending to other than advanced students the privilege of electives.

FIRST YEAR

Fall Semester		*Spring Semester*	
Subject	Hours	Subject	Hours
Chemistry 1 or 3	2	Botany 14	3
Chemistry 11, †16	8	Chemistry 2	3
Pharmacy 13	3	Chemistry 52	5
Pharmacy 7	2	Pharmacy 16, †8	4
Pharmacy 9	2	Pharmacy 2	4
Pharmacy 11	2	Pharmacy 4	2
	19		21

SECOND YEAR

Chemistry 53	3	Pharmacy 54	1
Pharmaceut. Histol. 15	3	Pharamacy 18, †16	8
Pharmacy 3	3	Pharmacy 14	5
Pharmacy 17, †10	5	Pharmacy 58	2
Chemistry 65, †2	1	Pharmacy 20	3
Chemistry 41, †8	4		
	19		19

Students who satisfactorily complete this curriculum receive the degree of Graduate in Pharmacy (Ph. G.)

DEPARTMENTS OF INSTRUCTION

NOTE:—The prefix (*) before the time designated for a course usually indicates that three hours of actual work are required to obtain credit for one hour, while a dagger (†) indicates that two hours are required to obtain this credit. In certain cases two and one-half hours' work give credit for one hour. This system presupposes that one hour of recitation work requires an average of two hours of preparation. *Courses designated by an odd number are given in the fall semester; those designated by an even number in the spring semester.*

CHEMISTRY

PROFESSOR MCKEE; ASSOCIATE PROFESSOR EASLEY; ASSISTANT PROFESSOR BURGHART; ASSISTANT PROFESSOR DURGIN; ASSISTANT PROFESSOR ASHLEY; MR. WHITTIER; MR. STEPHENSON; MR. ANDREWS

For undergraduates only

1. GENERAL CHEMISTRY.—This course deals with the general principles of the science. Lectures and recitations. Open to students who have taken chemistry in preparatory school. *Two hours a week.* To be accompanied by Course 5. Courses 1, 2, 5, and 6; or 3, 4, 5, and 6 constitute the first year's work in chemistry.

2. GENERAL CHEMISTRY.—This course is a continuation of Course 1. It is mainly devoted to a study of the metallic elements, their classification, compounds, and chemical properties. Lectures and recitations. *Three hours a week.* To be accompanied by Course 6.

3. GENERAL CHEMISTRY.—A course similar to 1 for those who have had no previous work in chemistry. *Two hours a week.* To be accompanied by Course 5.

4. General Chemistry.—A course similar to 2 but in continuation of 1 for those who did not take chemistry in the preparatory school. *Three hours a week.* To be accompanied by Course 6.

5. Laboratory Chemistry.—Laboratory work to accompany Course 1, or Course 3. †*Four hours a week.*

6. Laboratory Chemistry.—A continuation of Course 5 to accompany Course 2, or Course 4. †*Four hours a week.*

11. Qualitative Analysis.—This course includes the general reactions of the metals and acids with their qualitative separation. The subject is studied from the standpoint of the law of mass action and the ionic theory. †*Ten to* †*sixteen hours a week.*

15. Organic Chemistry.—An elementary one semester course in organic chemistry. Required of sophomores majoring in Agriculture. *Two hours class room and* †*two hours laboratory work a week.*

16. Organic Chemistry.—An elementary course giving in one semester a rapid view of the subject. Students who have sufficient time available are advised to take Courses 52 and 53 instead of this course, or Course 15. No prerequisite other than general chemistry. *Three hours class room and* †*four hours laboratory work a week.*

17. Gas and Fuel Analysis.—The work consists in the analysis of fuel and flue gases and the determinations of the proximate constituents and heating values of peat, fuel oils, and the common coals. †*Four hours a week.*

20. Descriptive Mineralogy.—The text-book is Moses and Parsons's Elements of Mineralogy. †*Four hours a week.*

41. Analysis of Pharmaceutical Products.—The work includes the simpler methods of quantitative analysis, especially those methods of interest to students in pharmacy. †*Eight hours a week* of 1915-16.

For graduates and undergraduates

52. Organic Chemistry.—The work is principally with the compounds of the aliphatic series. Lectures, recitations, and laboratory

work. The text followed is Cohen's Theoretical Organic Chemistry. Jones's Laboratory Outline of Organic Chemistry is used for the experimental work. Open to those who have taken qualitative analysis (Course 11.) *Three hours class room and †four hours laboratory work a week.*

53. Organic Chemistry.—A continuation of Course 52. The work is chiefly in the aromatic series. *Three hours a week.*

54. Organic Analysis.—The methods for the quantitative determination in organic substances of carbon, hydrogen, nitrogen, sulphur, and the halogens. Open to those who have completed Courses 52 and 53. *†Four hours a week.*

55. Cellulose.—A laboratory course in which the student studies the chemical reactions and characteristics of the commoner forms of cellulose. *†Four hours a week.*

57. Organic Preparations.—The work consists in the preparation and study of typical organic compounds. This course must be preceded by Courses 7 and 8. *†Six hours a week.*

58. Dyeing.—The practical application of dyes to cotton, wool, and silk. *†Fifteen hours a week* for two weeks.

60. Elementary Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric and volumetric methods. The text-book is Foulk's Quantitative Chemical Analysis. Open to students who have had Course 11. *†Ten hours a week.*

61. Volumetric Analysis.—The student is made familiar with the common methods of volumetric analysis in addition to the simpler volumetric methods used in Course 60. Course 60 is a prerequisite. *†Four hours a week.*

62. Water Analysis.—The analysis of water is studied both from the sanitary and from the industrial standpoint. Open to students who have taken Course 60. *†Four hours a week.*

63. Quantitative Analysis.—Analysis of alloys, minerals, etc. Both gravimetric and volumetric methods are used. Open to students who have taken Course 60. *†Eight hours a week.*

64. Assaying.—The fire assay of typical ores for gold and silver. †*Four hours a week.*

66. Urinalysis and Toxicology.—The analysis of urine and the detection of the more common poisons. †*Two hours a week.*

67. Electroanalysis.—The electrolytic methods of quantitative analysis for copper, nickel, lead, and similar determinations. Open to students who have taken Course 60. †*Four hours a week.*

68. Chemical Calculations. The calculation of the results of chemical analyses by the use of graphic schemes, slide rules, factors and tables. Methods of changing routine analytic work so that the calculations may be simplified. The use of density tables as used commercially. *Two hours a week.* First nine weeks.

70. Fuel and Gas Calculations. The methods of calculating the heat value of a coal, the constant of a calorimeter, the heat losses of a furnace and similar problems. *Two hours a week.* Last nine weeks.

71. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures and recitations. Open to students who have completed Chemistry 60, Mathematics 3, and Physics 1, 2, and 4. *Three hours a week.*

72. Physical Chemistry.—A continuation of Course 71. *Two hours a week.*

74. Physical-Chemical Methods.—The course will include: determination of molecular weights; the study of solutions through conductivity and other methods; rate of reaction and chemical equilibrium; potential and electromotive force; calorimetry; and the use of the more important instruments such as refractometer, polariscope, and spectroscope. †*Six hours a week.*

75. Metallurgy of Iron and Steel.—The occurrence, methods of extraction, properties, and alloys of iron. Open to students who have completed Courses 1, 2, 5, and 6 or 3, 4, 5, and 6. *Two hours a week.*

76. Metallurgy of the Metals other than Iron.—A course similar to 75. The metals other than iron and steel are studied. Open to students who have completed Course 11. *Two hours a week.*

77. Industrial Chemistry.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. As a part of this course an inspection trip is made to manufacturing plants of a chemical nature in New England. The expense of this trip the last few years has varied from $15 to $25 a year. Open to students who have completed Courses 11, 52, 53, and 60. *Two hours a week.*

78. Industrial Chemistry.—A continuation of Course 77. *Two hours a week.*

80. Paper Mill Machinery.—The study of simple mechanism is followed by the study of machines common to the manufacture of paper of various kinds. *Two hours a week.*

81. Paper.—A lecture course on paper and the various processes of present day paper making. Open to those who have completed Courses 11 and 52. *Two hours a week.*

82. Paper Manufacture.—A laboratory course in which paper machinery will be studied and paper of various kinds will be made. This course should be preceded by course 81. †*Four hours a week.*

83. The Making of Paper Pulp.—A laboratory course in paper pulp mill chemistry. The work taken up is that ordinarily falling to the chemist of a pulp mill of either the soda, sulphite, or sulphate type. Open to students who have completed Course 60. †*Four hours a week.*

84. Paper Pulp.—A lecture course on the processes of manufacturing paper pulp. The uses of pulp other than in the manufacture of paper will also be discussed. *Two hours a week.*

85. Bleaching of Pulp.—A laboratory course dealing with the methods of bleaching various kinds of pulp. Open to those who have taken Courses 82 and 83. **Six hours a week.* First nine weeks.

87. Paper Coloring.—A laboratory course on mordants, dye-stuffs, and their application, testing, retention, matching of shades, etc. Open to those who have completed Course 55. **Six hours a week.* First nine weeks.

88. Paper Testing. The testing of paper for bursting strength, tensile strength, stretch, crumpling, etc. Also the methods for estimating the kinds and percentages of the various fibres present in a sample of paper. **Three hours a week.*

89. Paper Problems.—A laboratory course for the study of selected processes of paper manufacture, as beating, sizing, loading, finishing, etc. Course 82 is a prerequisite. **Twelve hours a week.* Last half of fall semester.

93. Chemical Literature.—Reviews and discussions of leading articles appearing in the current English, German, and French chemical literature. Open to juniors majoring in the department who have completed the required work in modern languages. *One hour a week.*

94. Chemical Literature. A continuation of Course 93. *One hour a week.*

98. Thesis Work.—The thesis will embody the result of the study of a special problem in the laboratory. This problem will partake of the nature of original research and will ordinarily require *not less than* †*Ten hours a week* for its completion.

Primarily for graduates

101. Advanced Organic Chemistry.—A series of lectures on special topics in organic chemistry. Open to students who have completed Courses 52 and 53. *Three hours a week.*

103. Qualitative Analysis.—This course is similar to Course 11, but deals with organic compounds. It must be preceded by Courses 52 and 53. Noyes and Mulliken's Class Reactions and Identification of Organic Substances is used as a guide. †*Four hours a week.*

104. Technical Analysis.—An advanced course in the analysis of ores and industrial products. Open to students who have completed Courses 60 and 63. †*Eight hours a week.*

105. Electrochemistry.—A lecture course on the general principles of the subject and its applications in industrial work. Open to students who have completed Courses 71 and 72. *Two hours a week.*

Laboratory fees covering general chemicals, gas, etc., are as follows: Courses 5, 6, 11, 60 and 98, $5; Courses 16, 52, 57, 63, 74, 89, and 104, $3; Courses 15, 17, 20, 54, 55, 58, 61, 62, 64, 66, 67, 82, 83, 85, 87, 88, and 103 $2.

Broken apparatus and special chemicals are paid for at the chemical supply room by use of a "breakage card" obtained from the Treasurer's office. The portion of this card which has not been used will be redeemed at the end of the semester.

For courses in biological and agricultural chemistry, see the description of courses given by the department of Biological and Agricultural Chemistry.

Summer Term

Professor McKee; Associate Professor Easley; Assistant Professor Burghart

3s. General Chemistry.—A course of lectures and demonstrations on elementary chemistry. No previous knowledge of the subject is assumed. The course deals chiefly with the non-metals.

4s. General Chemistry.—A continuation of Course 3s dealing chiefly with the metals.

17s. Gas and Fuel Analysis.—This work consists in the analysis of fuel and flue gases and the determination of the proximate constituents and heating values of the more common fuels. *Ten hours of laboratory work each week.*

51s. Organic Chemistry.—This is a general introductory course in the subject open to those who have had the freshman course in general chemistry or its equivalent. It is generally, though not necessarily, accompanied by laboratory work in the subject.

73s. Physical Chemistry.—Lectures on selected chapters of the subject touching upon the following phases: molecular structure, the mass law, the theories of solution and their applications, especially along the line of electro-chemistry.

91s. Inorganic Preparations.—A laboratory course in the purification and preparation of typical inorganic compounds. *Ten hours of laboratory work each week.*

92s. Methods of Laboratory Manipulation.—Glass bending, blowing, cutting, boring, and annealing. Sealing of wires into glass and repair of glass apparatus. Soldering of the more common metals. Methods of labeling. Stains, varnishes, and lacquers for wood and metal apparatus. Setting up of apparatus. *Six hours of laboratory work each week.*

Laboratory Work in general chemistry, qualitative analysis, quantitative analysis, physical chemistry and organic chemistry will be arranged according to the needs of those attending the Summer Term.

Graduate Work.—Attention should be called to the courses that can be taken for graduate credit by those who already have a bachelor's degree (Courses 51s, 73s, 91s, 92s, and several of the courses indicated under "Laboratory Work"). It is the custom of the department to vary from year to year the courses offered in such a way that a student attending several successive summers will be able to complete the work necessary for a Master's degree. The fact that a considerable part of this work is of a laboratory character enables it to be varied in order and character to suit the needs of the individual student.

CIVIL ENGINEERING

Professor Boardman; Professor Brown; Associate Professor Bean; Associate Professor Kaulfuss; Assistant Professor Lyon; Mr. Donegan; Mr. Jenks

For undergraduates only

1. Plane Surveying.—Recitations, lectures and field work. The recitations and lectures cover the general theory of plane surveying; description of surveying equipment, and the adjustment of the instruments; use of the chain, tape, compass, transit, and level, and other surveying operations. The field work consists of practice in the use of the chain, tape, compass, transit, level and other surveying equipment.

Required of all students in the departments of Civil Engineering and Forestry. *Six hours a week.* (Subdivision of field and recitation work determined by the instructor. The work shall be the equivalent of thirty-six periods of recitations or lectures and thirty-six periods of field work.)

2. Plotting.—This course consists chiefly of map drawing from field notes, by the different methods in common use. Course 1 is prerequisite. **Six hours a week.* First twelve weeks.

3. Plane Surveying.—A course similar to the recitations and lectures in Course 1, given to students in the departments of Mechanical and Electrical Engineering. *Two hours a week.*

4. Field Work in Surveying.—A continuation of the field work in Course 1. This course consists of original surveys, problem work, adjustment of instruments, note keeping, etc. Course 1 is prerequisite. **Six hours a week.* Last six weeks.

5. Field Work in Surveying.—The use of the chain, compass, transit, and level. Required of all students in the departments of Mechanical Engineering and Electrical Engineering. **Six hours a week.* First six weeks.

6. Railroad Curves.—A course of recitations and lectures investigating the geometry of railroad curves switches and turnouts. Course 1 or 3 is prerequisite. *Three hours a week.* First twelve weeks.

8. Railroad Field Work.—This course consists of practice in running in railroad curves and turnouts. A general application of the theories of Course 6. Courses 5 and 6 are prerequisite. †Six hours a week. *Last six weeks.*

20. Masonry Construction.—A course including the discussion of building stone and brick; cement and their tests; mortar; plain and reinforced concrete; piles; foundations; pneumatic caissons; open caissons; bridge piers, and abutments. *Two hours a week.*

21. Railroad Field Work.—The survey for a railroad about three miles in length. The preliminary and location surveys are made, including running in the curves, obtaining the topography, establishing the grade, and setting the slope stakes. Courses 4, 6, and 8, or Courses 4 and 27 are prerequisite. **Six hours a week.* First nine weeks.

22. Advanced Surveying.—This course consists of lectures, readings and recitations on the theory of base line measurement, triangulation, precise leveling, topographical surveying, the use of the plane table, and the theory and application of least squares. It is a preparation for Course 24. Course 21 is prerequisite. *Two hours a week.*

23. Railroad Office Work.—The office work of mapping the notes taken in Course 21, including the calculation of the earth work. Courses 2 and 21 are prerequisite. **Six hours a week.* Last nine weeks.

24. Summer Field Work.—This course consists of the practical application in the field and in the office of the principles given in Course 22. The work is given during the two weeks following Commencement. Course 22 is prerequisite.

25. Railroad Construction.—Recitations and lectures on the field and office practice of staking out and computing amount of excavation and fill; borrow-pits; haul; methods and materials of railroad construction; subgrade; roadbed; track and track work. Course 6 is prerequisite. *Two hours a week.*

26. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instrument and observations; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. *Three hours a week.*

27. Simple Curves and Earthwork.—A lecture course on the theory and practice of simple railroad curves, and on the field and office practice of staking out and computing earthwork. Given to students outside of the department of Civil Engineering who desire to take Courses 21 and 23. Courses 1 and 5 are prerequisites. *One hour a week.*

28. Structures.—The theory of the simple beam; loads and reactions; vertical shear; bending moment; influence lines. The object of this course is to give the student a drill in finding vertical shear and bending moment under different systems of loadings, and to familiarize him with the use of steel hand books, various tables, and the slide rule. Class room, *Two hours a week.* Drawing room, †*Two hours a week.*

29. Municipal Engineering.—The construction and improvement of city streets and pavements under different conditions of climate and

traffic; general principles of sewer design; a study of city sanitation, water supply, and sewage disposal. Course 1 or 3 is prerequisite. *Two hours a week.*

31. Roads and Trails.—Consists of lectures on the practice of building and maintaining trails and ordinary types of roads, and includes the design of simple beams and girders.

33. Foundations.—Building stones; manufacture of cement; tests of cement; mortar; concrete, both plain and reinforced; piles; foundations; caissons. This is a course of lectures given to students in the departments of Mechanical and Electrical Engineering. *One hour a week.*

35. Hydraulics.—A short course which includes the main principles given in Course 26. Given to students in the departments of Mechanical and Electrical Engineering. *Two hours a week.*

Thesis Work.—The study of and report upon some original investigation, or design. *Time to be arranged.* See regulations regarding degrees.

For graduates and undergraduates

51. Hydraulic Field Work.—The measurement of the flow of rivers is illustrated by the use of the current meter. Trips are made to the United States Geological Survey gaging station located on the Penobscot River between Howland and West Enfield, where discharge measurements are made. The data thus obtained is used, together with that obtained from the Survey, to plot the rating curve, etc. The measurements taken are reported to the Survey. The expenses of this course are paid by the students. Required of students taking Option 1. Course 26 is prerequisite. †*Four hours a week.*

52. Hydraulic Engineering.—A continuation of Course 55. Course 51 is prerequisite. *Three hours a week.*

53. Hydraulic Field Work.—A short course similar to Course 51. Required of students taking Options 2 and 3. Course 26 is prerequisite. †*Two hours a week.*

55. Hydraulic Engineering.—Rainfall, evaporation, and stream flow; the development and utilization of water power; the develop-

ment of the modern turbine. Lectures and recitations. Required of students electing Option 1. Course 26 is prerequisite. *Two hours a week.*

57. Structures.—A continuation of Course 28. The theory of stresses in framed structures, including the plate girder, bridge trusses, and roof trusses; reinforced concrete; the principles of designing. The object of this course is to train the student in the application of the principles of mechanics to the design of structures. *Three hours a week.*

58. Structures.—A continuation of Course 57. This course includes a study of the higher types of structures, and the preparation of the shop drawings. Course 28 is prerequisite. *Three hours a week.*

59. Designing.—This course takes up the design for some of the common types of steel structures, and the preparation of the shop drawings. Course 28 is prerequisite. †*Nine hours a week.*

60. Graphic Statics.—Class and drawing room work in the graphical determination of shear and bending moment, and the analysis of bridge and roof trusses by graphical methods. Course 57 is prerequisite. *Two hours a week.*

62. Designing.—A continuation of Course 59. Course 57 is prerequisite. †*Six hours a week.*

63. Railroad Engineering.—A course discussing the economics of railroad location and operation. The railroad corporation, its rights and limitations; traffic; operating expenses; the locomotive and its work; distance; curves; grades. Required of students electing Option 2. Course 25 is prerequisite. *Three hours a week.*

64. Railroad Engineering.—A course in railroad design. A map reconnaisance for a railroad about twelve to fifteen miles in length is made, applying the theories of Course 63. The final line is located, profile made, grades established, and drainage areas and culverts calculated. The rails, switch points, frogs, and ties for a turnout are designed. A railroad yard layout is computed and plotted. Required of students electing Option 2 or 3. Courses 23 and 63 are prerequisites. †*Six hours a week.*

66. Railroad Engineering.—A course of lectures and recitations studying various railroad structures; trestles; culverts; grade crossings and elimination; yards and terminals; signals and interlocking; maintenance and betterment work. Required of students electing Option 2 or 3. Course 63 is prerequisite. *Two hours a week.*

67. Cement Laboratory.—This course consists of making the regulation commercial tests upon different samples of cement. A laboratory fee sufficient to cover the cost of materials used is charged. This course is required of students in Mechanical Engineering and in Civil Engineering. Course 20 is prerequisite for students in Civil Engineering. *The time varies.*

69. Highway Engineering.—The location, drainage, construction, and maintenance of country roads under various conditions of soil, climate, traffic, etc.; highway economics, legislation and administration. Required of students electing Option 3. Course 29 is prerequisite. *Three hours a week.*

70. Road Materials Laboratory.—Physical and chemical tests of sand, gravel, stone, brick, wood block, bituminous compounds, and other road materials. Courses Civil Engineering 29 and Chemistry 1 or 3, 2 or 4, 5, and 6 are prerequisites. **Three hours per week.*

ELECTRICAL ENGINEERING

Professor Barrows; Associate Professor Childs; Mr. Cheswell, Mr. James

For undergraduates only

1. Electricity and Magnetism.—This is an elementary course intended to give the student an insight into the fundamental laws and a survey of the elementary principles upon which electrical engineering is based. A text-book and problem course. Required of sophomores in Electrical Engineering. *Two hours a week.*

2. Electricity and Magnetism.—A continuation of Course 1 showing the application of the fundamental electrical laws and principles to the design, construction, and operation of electrical apparatus. Recitations and problems. Required of sophomores in Electrical Engineering. *Two hours a week.*

5. Elements of Electrical Engineering.—This Course takes up the practical application of laws studied in courses 1 and 2, and in physics and the fundamental principles of electrical engineering. The work is of the nature of a text-book course, consisting of recitations and problems. Required of juniors in Electrical Engineering. *Three hours a week.*

6. Elements of Electrical Engineering.—A continuation of Course 5, showing the application of the fundamental principles to the construction, operation, and testing of direct current generators and motors and to general engineering problems. Required of juniors in Electrical Engineering. *Three hours a week.*

9. Elements of Alternating Currents. A study of the effect of alternating currents upon various electrical circuits; voltage, current, and wattage relations in inductive and capacity circuits; application of the fundamental elements of alternating currents to the design, construction and operation of apparatus and machinery; calculations and problems. Required of seniors in Electrical Engineering. *Three hours a week.*

11. Electrical Design.—A course on the design, construction, and cost of direct current generators and motors, and the general features of the design of alternating current machinery; the study of the insulation problem to meet the requirements of high electric pressures is also taken up, together with the discussion of modern electrical development. Required of seniors in Electrical Engineering. *Two hours a week.*

12. Technical Reviews.—Special subjects are assigned to each student, which he investigates with the aid of library books and current literature, and presents the results to the class; also the discussion of the design and construction of electrical instruments and special forms of apparatus of interest in scientific development, and of possible practical application. Required of seniors in Electrical Engineering. *One hour a week.*

13. Design of Electrical Machinery.—This course is given in the drawing room, and is the practical application of the work in Course 11. Calculations are made for electro-magnetic devices and for direct current generators, involving a knowledge of the fundamental electrical

principles of design, the principles of mechanical design, cost of materials and cost of labor, and the use of the student's judgment to fit particular circumstances and financial conditions. Required of seniors in Electrical Engineering. †*Four hours a week.*

15. Laboratory Work.—A continuation of Course 8, taking up the testing of direct current apparatus and machinery, and alternating current measurements; investigation of power plant equipment and electric lighting. Required of seniors in Electrical Engineering. The charge for this course is $3.00. †*Four hours a week.*

16. Laboratory Work.—A course showing the practical application of the work done in Courses 9 and 52, and continuing the laboratory work of Course 15, including the operating, testing, and experimental work with alternating current instruments, generators, motors, transformers, rotary converters, and polyphase power measurements. Required of seniors in Electrical Engineering. The charge for this course is $3.00. †*Four hours a week.*

18, 19. Electrical Engineering Practice.—A course given for the expansion of laboratory work into the construction of laboratory apparatus and development of original ideas of the student; also for testing, repairing, or adjusting commercial electric plants. This course is designed and will be expanded to give the student an opportunity to apply his technical training and ability to actual engineering problems and difficulties. Required of seniors in Electrical Engineering. *Fifty hours during the senior year.*

21. Thesis Work.—The designing of electrical apparatus, or original research work in which the student is particularly interested; and a clear, complete report of what has been accomplished. The organization of the work and the carrying out of the same is left almost entirely to the student, and is a measure of his energy and ability as an engineer. Required of seniors in Electrical Engineering. *Fall semester and through the senior year, as required.*

30. Direct Current Machinery.—A course dealing with the fundamental electrical principles and their application to the production, distribution, and utilization of power from the standpoint of a mechanical engineer. Required of seniors in Mechanical and Chemical Engineering. *Two hours a week.*

31. Alternating Currents.—A required course for seniors in Mechanical and Chemical Engineering which continues the work taken up in Course 30. The fundamental elements of alternating current measurements and calculations are studied; also the operation of alternating current generators, motors, and polyphase apparatus is treated from the operating engineer's point of view. *Two hours a week.* Fall semester.

32. Electrical Applications.—The object of this course is to supplement the study of the fundamental electrical principles given in 30 and 31 with the study of the practical applications of electrical machinery to the problems met by the mechanical engineer, such as machine tool drive, crane and hoist work, industrial applications, etc. Required of seniors in Mechanical Engineering. *Two hours a week.*

33. Laboratory Work.—For Mechanical and Chemical Engineers. Electrical measurements and the operating and testing of direct current generators and motors, showing the practical application of the work taken up in Courses 30 and 31. The work is arranged for the particular needs of the mechanical engineer. This course is open to Civil Engineering students who have previously elected one of the preliminary electrical courses. Required of seniors in Mechanical and Chemical Engineering. The charge for this course is $3.00. †*Four hours a week.*

34. Laboratory Work.—A continuation of 33 involving the operation and testing of alternating current apparatus. Required of seniors in Mechanical Engineering. The charge for this course is $1.50. †*Four hours a week.* First nine weeks.

42. Electrical Generation and Transmission of Power.—A required course for seniors in Option 1 in Civil Engineering, taking up the elements of electrical measurements, the generation, transmission, and utilization of power, covering the electrical future of water power development. *Two hours a week.*

For graduates and undergraduates

51. Illuminating Engineering.—A course devoted to the study of the different types of lamps, light, photometry, illumination calculations, and the problems of interior and exterior illumination. Optional to juniors in Electrical Engineering. *Two hours a week.*

52. Advanced Alternating Currents.—A continuation of Course 9, taking up a study of polyphase apparatus in the generation, transmission, distribution, and utilization of power; engineering applications and practical problems involving the theory and training of the course and the technical ability of the students. Required of seniors in Electrical Engineering. *Two hours a week.*

53. Telephone Engineering.—A course dealing with the principles of telephone apparatus and circuits. The different telephone systems, together with party lines, trunk lines, and central station problems are given due consideration. Optional to seniors in Electrical Engineering. *Two hours a week.*

54. Electrical Railway Engineering.—A study of the preliminary steps taken in electric railway engineering; the selection of the proper motor equipment for a given class of service; car, bond, and transmission testing. Optional to seniors in Electrical Engineering. *Two hours a week.*

56. Electrical Power Plants.—This course covers the electrical equipment of the power plant. Particular attention is given to the methods of control, circuit interrupting devices, lightning arresters, and methods of arranging station and substation switch boards. Required of seniors in Electrical Engineering. *Two hours a week.*

58. Electrical Transmission.—A course dealing with high voltage long distance transmission problems, and transmission line phenomena. A study is made of the latest practice and methods of securing most reliable service. Special attention is given to the economic features. Required of seniors in Electrical Engineering. *Two hours a week.*

MATHEMATICS

The courses in this department are described under the College of Arts and Sciences

MECHANICAL ENGINEERING

*Professor Jewett; Assistant Professor Lekberg; Assistant Professor Chapman; Mr. Davee; Mr. Carter; Mr. Jennison

For undergraduates only

1. Woodworking.—A number of graded exercises in woodworking designed to give the student familiarity with the tools used in modern woodworking practice, and also to teach him to work from dimensioned drawings. These exercises lead to pattern-making. The pattern work consists of making complete patterns and core boxes from drawings. Required of students in Mechanical Engineering. Charge for materials, $4.00. **Six hours a week.*

3. Woodworking.—A shorter course than 1, arranged for students in Electrical Engineering. Required. Charges for materials, $4.00. **Four hours a week.*

6. Forge Work.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Required of students in Mechanical and Electrical Engineering. Charge for material, $5.00. **Four hours a week.*

7, 8. Machine Work.—Exercises in chipping and filing; lathe work; exercises on planer, shaper, and milling machines; making cut gears, machinists taps, etc. Course 2 is a prerequisite. Required of students in Mechanical Engineering. Charge for materials, $5.00. **Six hours a week.*

9, 10. Machine Work.—A shorter course than 7 and 8, required of students in Electrical Engineering. Course 2 is a prerequisite. Charge for material $5.00. **Four hours a week.*

11, 12. Foundry Work.—Foundry instruction is given in molding, mixing of materials, operation of cupolas, etc. The work is assigned in connection with Course 5, ten per cent. of the hours registered for under Course 5 being applied to foundry work.

13. Power Generation and Application.—A course arranged for forestry students to cover fuels, steam boilers, steam and gas engines, locomotives, log haulers, elementary mechanics, principles of beams and columns. *Two hours per week.* Elective.

---

* Absent on leave.

15. Heating and Ventilation.—Course arranged for students in Home Economics. *Two hours a week, first nine weeks.*

39. Kinematical Drawing.—This course supplements Course 4 which is a prerequisite. The drawings are of cams and gear teeth and graphical studies of kinematic problems. Required of students in Mechanical Engineering. **Four hours a week.*

For graduates and undergraduates

56. Kinematics.—A study of motion in machine construction and of the elements of machines; links, gears, cams, etc. Required of students in Mechanical and Electrical Engineering. *Three hours a week.*

57. Mechanism of Machines.—Lectures supplementing Course 4. Required of students in Mechanical Engineering. Course 56 is a prerequisite. *Three hours a week; six weeks.*

61. Materials of Engineering.—Properties of the metals, timber, rope; protective coatings and preservatives. Required of students in Mechanical Engineering. *Three hours a week, 12 weeks.*

64a. Graphics.—A course given in connection with Course 64b. *Two hours a week, first half.*

64b. A drawing room course supplementing the classroom work in graphics. The problems assigned include the graphical determination of center of gravity, bending moment of beams, shear diagrams, stresses in bridge members and roof trusses. Required of juniors in mechanical engineering.

66. Machine Design.—A study of the designing of machines, proportioning of parts for strength and rigidity, etc. Mechanics 5 and 6 are prerequisites. Required of students in Mechanical and Electrical Engineering. *Three hours a week.*

67. Machine Design.—A continuation of Course 8, including the execution of the design of some typical machines. Required of students in Mechanical Engineering. Course 66 is a prerequisite. **Six hours a week.*

68. Valve Gears.—The principal steam engine valve motions are studied in order to enable the student to gain a knowledge of the method of designing valve mechanism; the Zeuner, Bilgram, and other valve-diagrams are made use of in this connection; practical problems are solved in the drawing room. Required of students in Mechanical Engineering. *One and one-half hours a week.*

70. Mechanical Laboratory.—The calibration of instruments used in engineering testing, followed by the more elementary experimental work. Required of juniors in Mechanical Engineering. The charge for the course is $2.00. †*Two hours a week.*

71. Mechanical Laboratory.—Tests of materials, hydraulic testing, injectors, use of calorimeters, valve settings, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. *Four hours a week.*

72. Mechanical Laboratory.—Tests of steam engines and boilers, gasoline engines, etc. Required of seniors in Mechanical Engineering. The charge for the course is $3.00. †*Four hours a week.*

74. Strength of Materials by Test.—A course in the mechanical laboratory for students in Civil Engineering. The charge for the course is $2.00. †*Two hours a week.*

77. Mechanical Laboratory.—A course of experiments in the laboratory especially arranged to meet the needs of the students in Electrical Engineering. The charge for the course is $2.00. †*Three hours a week.*

80. Heat Engineering.—This course deals with the fundamental theories of gases and steam, illustrated by problems of practical form. The laws of thermodynamics; laws of gases; characteristic equations for gases; kinds of expansion and compression; Carnot's cycle; heat quantities in steam; use of the steam tables; steam equations; quality of steam; calorimeters; entropy. Mathematics 8 and Physics 1 and 2 are prerequisites. Required of students in Mechanical and Electrical Engineering. *Three hours a week.*

83. Heat Engineering.—Types and details of steam boilers, engines, and auxiliary machinery. A consideration of fuels and the chemistry

of combustion; efficiency factors of the steam boiler plant; heat losses in steam engines; compound steam engines; refrigeration; gas engine cycles and gas producer principles. For students in Electrical Engineering turbines are included. Required of students in Mechanical and Electrical Engineering. Course 80 is a prerequisite. *Three hours a week.*

84. Steam Engineering.—A continuation of Courses 80 and 83, dealing with steam engines, steam turbines, air compressors, refrigerating machines, and gas engines; considerations affecting the design and efficiency of operation of heat motors, the lay-out of power plants, and power plant economics. Required of students in Mechanical Engineering. *Two hours a week.*

88. Steam Engine Design.—A study of problems affecting the design of the steam engine with regard to their bearing on general machine design; a steam engine is partially designed in the drawing room. Required of students in Mechanical Engineering. **Six hours a week.* Courses 66 and 83 are prerequisites.

89. Steam Boiler Design.—A study of the important points affecting the design of fire-tube and water-tube boilers, including the complete design of a boiler in the drawing-room, with boiler specifications and chimney design. Required of students in Mechanical Engineering. **Six hours a week.* Course 66 is a prerequisite.

92. Heating and Ventilation.—Required of students in Mechanical Engineering. Course 80 is a prerequisite. *Three hours a week, six weeks.*

94. Hydraulic Machinery.—A study of hydraulic turbines, water wheels, and other features of hydraulic power plant development. *Three hours a week, first half.*

96. Seminary.—General discussion of leading articles appearing in current engineering literature. Elective. *One hour a week.*

99. Factory Organization and Management.—A course of lectures and assigned reading upon various styles of organization for industrial enterprises; the planning and equipping of factory plants; systems of management, etc., factory design and construction. Required of students in Mechanical Engineering. *Two hours a week.*

Thesis.—The results of some original investigation or design presented in proper form. The subject should be selected early in the fall semester of the senior year. See regulations regarding degrees.

MECHANICS AND DRAWING

Professor Weston; Associate Professor Grover; Mr. Farnham; Mr. Leighton

For undergraduates only

1. Drawing.—Instruction and practice in technical freehand drawing and lettering, in the care of drawing instruments, and their use in elementary problems involving right lines, circles, conic sections, and orthographic projections. **Six hours a week.*

2. Drawing.—A continued study of the methods of orthographic protection, isometric projection, and oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. **Six hours a week.*

3. Drawing.—The elementary principles and problems of descriptive geometry, including intersections and developments. **Six hours a week.*

4. Drawing.—A continued study of the making of working drawings of simple machines, together with instruction and practice in making titles for the same. **Six hours a week.*

9. Drawing.—A course designed especially for students in agriculture and for non-engineers. It combines the fundamental principles of Course 1 and Course 2. **Three hours a week.*

10. Drawing.—A continuation of Course 9. **Three hours a week.*

11. Mechanics.—An elementary course in the fundamental principles of statics, kinematics and kinetics, with applications to practical problems, as friction, transmitting power of belts, stresses and strains of bodies subject to tension, compression and shearing, as beams and columns. For students in Chemical Engineering. *Three hours a week.*

For graduates and undergraduates

51. Mechanics.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in find-

ing centre of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curves; torsional stresses and theories of stress in long columns. *Five hours a week.*

52. Mechanics.—A continuation of Course 51. *Five hours a week.*

Primarily for graduates

101. Advanced Mechanics.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function with applications to problems in gravitation, hydromechanics, etc. *Two hours a week.*

102. Advanced Mechanics.—A continuation of Course 101. *Three hours a week.* Spring semester.

MILITARY SCIENCE AND TACTICS

The courses in this department are described on page 226

PHARMACY

Associate Professor Jarret; Doctor Connors

2. Organic Pharmacognosy.—This course teaches the art of identifying, selecting, and valuing drugs. Its practice involves both macroscopic and microscopic work. The instruction concerning each drug includes its identification, variety, quality, packing, storing, and freshness, and the study of the impurities to which it is specially liable. The text-book is the U. S. Pharmacopoeia. *Four hours a week.*

3. Materia Medica.—This course treats of the physical, chemical, physiological, and therapeutical properties of medicine: their doses: poisons and antidotes. *Three hours a week.*

4. Inorganic Pharmacognosy.—Nomenclature: practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopoeia. *Two hours a week.*

7. Pharmaceutical Chemistry.—Chemical formulae; principles; chemical reactions; chemical equations, with special reference to pharmaceutical processes. *Two hours a week.*

9. Pharmaceutical Arithmetic.—The aim of this course is to teach the student to use easily and accurately the various current weights and measures. Special effort is made to master the metric system in all of its practical details. It also includes the arithmetic pertaining to the science and art of pharmacy. *Two hours a week.*

11. Pharmaceutical Latin.—This course deals with the Latin pertaining to pharmacy. Such essentials of inflection and syntax are taught as will serve the practical purpose of enabling the student to read prescriptions with ease and intelligence. *Two hours a week.*

13. Theoretical Pharmacy.—The exposition of the principles upon which pharmaceutical operations are based. This includes the study of pharmacopoeias, dispensatories, etc.; weights and measures; specific gravity; pharmaceutical uses of heat; extemporaneous pharmacy; the principles of dispensing, etc. The text-book is Army's Principles of Pharmacy. *Three hours a week.*

14. Pharmacopoeia.—A complete review of the pharmacopoeia, with special reference to the chemical and pharmaceutical principles involved in the tests and preparations. The text-books are the U. S. Pharmacopoeia and the U. S. Dispensatory. *Five hours a week.*

16. Laboratory Pharmacy (Manufacturing).—The operations of manufacturing pharmacy, including the preparation of excicated salts, granulated salts, effervescent salts, waters, infusions, decoctions, mucilages, syrups, elixirs, tinctures, fluid extracts, spirits, oleoresins, troches, resins, iron salts, mercury salts, etc.: and such additional U. S. P. and N. F. preparations as the time will permit, selecting the additional preparations from those which require skill and careful manipulation. †*Eight hours a week.* The text-books are the U. S. Pharmacopoeia and the National Formulary.

17. Laboratory Pharmacy (Manufacturing).—A continuation of Course 16. †*Ten hours a week.*

18. Laboratory Pharmacy (Dispensing).—This course teaches the compounding of medicine. The time is so arranged as to give a liberal number of hours for the actual work in the compounding of prescriptions. Incompatibilities, how to overcome them, etc. The work includes the preparation of solutions, mixtures, emulsions, pills, capsules, powders, cachets, tablets, tablet triturates, troches, ointments, plasters, suppositories, etc. †*Sixteen hours a week.*

20. Prescriptions.—This course includes the abbreviations and symbols used; reading, labeling, checking and filing. Critical examination of prescriptions from actual files, with reference to principles, and to physiological, pharmaceutical, and chemical incompatibilities; doses; methods and order of compounding, etc. *Three hours a week.*

54. Pharmacy Readings.—Current pharmacy literature: research and reference readings; abstracting; reports and also theme writing on various subjects pertaining to pharmacy. *One hour a week.*

58. Commercial Pharmacy.—Trade or commerce in pharmaceutical products. It includes bookkeeping, business correspondence, commercial and business law, and business practice. *Two hours a week.*

PHYSICAL CULTURE AND ATHLETICS

The courses in this department are described on page 227

PHYSICS

The courses in this department are described under the College of Arts and Sciences

REQUIRED COURSES

Work in the departments of Military Science and Tactics and Physical Training is required of all men students, with certain exceptions noted elsewhere.

MILITARY SCIENCE AND TACTICS

LIEUTENANT CLARK

1. MILITARY, FIRST YEAR COURSE
   (a) PRACTICAL
      1—U. S. Infantry Drill Regulations, to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies
      2—Field Service Regulations
      3—Indoor Rifle Practice
   (b) THEORETICAL
      1—U. S. Infantry Drill Regulations, to include the School of the Company
      2—Field Service Regulations
      3—Small Arms Firing Regulations
      4—Lectures on Military Organization Methods, History, and Policy

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the freshman year, counting one-fifth credit.*

2. MILITARY, SECOND YEAR COURSE
   (a) PRACTICAL
      The same as Course 1 (a)
   (b) THEORETICAL
      1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches, and Ceremonies
      2—Records and Official Papers
      3—Small Arms Firing Regulations

4—Field Service Regulations
5—Lectures

Required of all students with the exceptions noted elsewhere. *Three hours, or the equivalent, a week for the sophomore year, counting one-fifth credit*

3. Military, Third Year Course
(a) Practical
Duties consistent with rank in carrying out (a) in Courses 1 and 2
(b) Theoretical
Minor Tactics, Field Orders, the Service of Supply

Open to all who have completed Course 3. *Three hours or the equivalent, a week, counting one-fifth credit*

PHYSICAL CULTURE AND ATHLETICS

Professor Wingard; Mr. Monohon; Miss Stebbings

1. Physical Training.—Class formation and figure marching; setting-up drills; free-arm and calisthenics movement: elementary dumbbell, wand, and apparatus exercises. *One hour lecture and *two hours practice a week.*

2. Physical Training.—Intermediate and advanced class exercises and combination apparatus work. *One hour lecture and *two hours practice a week.*

3. Physical Training.—An elective advanced course. **Two hours gymnasium. Two hours lecture.*

4. Physical Training.—A continuation of Course 3. **Two hours gymnasium and two hours lecture.*

5. Practical Hygiene.—*Two hours a week.*

6. Practical Hygiene.—A continuation of Course 5. *Two hours a week.*

Beginning with the fall semester of 1914-15 courses in this department have been arranged for women students. They occupy three hours a week throughout the year, giving a credit of two semester hours. More definite announcement concerning these courses will be made later.

MAINE AGRICULTURAL EXPERIMENT STATION

STATION STAFF

CHARLES DAYTON WOODS, Sc. D.	*Director*
JAMES MONROE BARTLETT, M. S.	*Chemist*
WARNER JACKSON MORSE, Ph. D.	*Plant Pathologist*
RAYMOND PEARL, Ph. D.	*Biologist*
FRANK MACY SURFACE, Ph. D.	*Biologist*
EDITH MARION PATCH, Ph. D.	*Entomologist*
HERMAN HERBERT HANSON, M. S.	*Associate Chemist*
MAYNIE ROSE CURTIS, Ph. D.	*Assistant Biologist*
ROYDEN LINDSAY HAMMOND	*Seed Analysist and Photographer*
EDWARD EUGENE SAWYER, B. S.	*Assistant Chemist*
ELMER ROBERT TOBIE, B. S.	*Assistant Chemist*
MICHAEL SHAPOVALOV, M. S.	*Assistant Pathologist*
JOHN RICE MINER, B. A.	*Computer*
JACOB ZINN, Agr. D.	*Assistant Biologist*
JOHN WHITTEMORE GOWEN, B. S.	*Assistant Biologist*
HOYT DENNIS LUCAS, B. S.	*Assistant Chemist*

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, (see page 8), composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads of the various departments of the Station, the Dean of the College of Agriculture, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, the State Dairymen's Association, the Maine Live Stock Breed-

ers Association, and the Maine Seed Improvement Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station for 1913-14 was about $68,750; $15,000 of which came from the Hatch fund; $15,000 from the Adams fund; $21,000 from State appropriations and fees from feeding stuff inspection, fertilizer inspection, food and drug inspection, fungicide and insecticide inspection, and seed inspection; $4,500 from State appropriation for printing; $5,000 from the State appropriation for animal husbandry investigations; $1,250 from the Bangor and Aroostook Railroad for investigations on Aroostook Farm; and about $7,000 from the sale of produce and miscellaneous sources.

OBJECT

The purpose of the experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

The work that the Station can undertake from the Adams Act fund is more restricted as the fund can "be applied only to paying the neces-

sary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective states and territories."

Any resident of Maine concerned in agriculture has the right to apply to the Station for any assistance that comes within its province.

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described on page 29. The Station is well equipped in laboratories and apparatus, particularly in the lines of biological, chemical, entomological, horticultural, pomological, plant pathological, and poultry investigations. It has extensive collections illustrating the botany and entomology of the State. It has a library of over 3,500 volumes, chiefly agricultural and biological journals and publications of the various experiment stations.

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn, and other farm crops." The farm is situated in the counties of Kennebec and Androscoggin, largely in the town of Monmouth. It is on the Farmington branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor," is on the farm.

The farm contains 225 acres, about 200 of which are in orchards, fields, and pastures. There are in the neighborhood of 3,000 apple trees upon the place which have been set from 20 to 30 years. Fields that are not in orchards are well adapted to experiments with corn, potatoes, and similar general farm crops. The house has two stories with a large wing, and contains about 15 rooms. It is well arranged for the Station offices and for the home of the farm superintendent. The barns are large, affording storage for hay and grain. The basement affords limited storage for apples, potatoes, and roots.

AROOSTOOK FARM

The Legislature of 1913 appropriated $10,000 for the purchase of a farm in Aroostook County for scientific investigations in agriculture to be under "the general supervision, management and control" of the

Maine Agricultural Experiment Station. About 50 citizens of Presque Isle raised an additional $13,000 and a farm to be known as Aroostook Farm was purchased. The farm is two miles south of Presque Isle on the main road to Houlton. The Bangor and Aroostook Railroad crosses the farm. The farm is served by a flag station of the same name as the farm.

The farm contains about 275 acres, about half of which is cleared. The eight room house provides an office and home for the farm superintendent. The large barn affords storage for hay and grain and has a large potato storage house in the basement. The Legislature did not provide for the maintenance of the work at this farm. A gift of $2,500 from the Bangor and Aroostook Railroad made it possible to begin operations in a limited way in 1914.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it s better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, investigations in animal husbandry, orchard and field experiments, poultry investigations, and entomological research.

INSPECTIONS

The Commissioner of Agriculture is the executive of the laws regulating the sale of agricultural seeds, commercial feeding stuffs, commercial fertilizers, dairy products, drugs, foods, fungicides and insecticides. The law requires the Commissioner to collect samples and have them analyzed at the Station. The law also requires the Director of the Station to make the analyses and publish the results.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are published in part in scientific journals at home and abroad, in U. S. Department of Agriculture publications, and in Bulletins of the Station. All of the more important and immediately practical studies are published in the Station Bulletins. The Bulletins for a year form a volume of 300 to 400 pages and together make up the annual report. Bulletins are sent to the press of the State, to exchanges, libraries, and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent free to residents of Maine whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. About twelve such pamphlets, aggregating 150 to 200 pages, are printed annually, and are bound as an appendix with the annual report. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs, and seeds are sent to farmers, and those reporting food and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars, and similar fleeting publications. From twenty to thirty are published each year and are sent to different addresses according to the nature of the subject matter.

On request, the name of any resident of Maine will be placed on the permanent mailing list to receive either or both the Bulletins and Official Inspections as they are published.

SUMMER TERM

The Summer Term of the University of Maine is not a summer school, but so far as practicable the work is coördinate with that of the remainder of the year. The majority of the courses offered are of college grade, and, when completed, entitle the student to full credit on the university books. There are no examinations for admission, and students are permitted to enter any class in which they can satisfactorily carry on the work. Before counting this work toward a collegiate degree, the entrance conditions must be met.

Three classes of students may be benefited by the work of this term:

1. Teachers in the high schools and grammar schools who wish to fit themselves for more advanced positions. A small expenditure of time and money in the summer vacation may be the means of securing a more desirable position. School superintendents are coming to discriminate in favor of those teachers who advance in their work.

2. Students who desire to anticipate work in their curricula, or who may have work in arrears. A student should be able to make one credit, the equivalent of a five hours' subject for eighteen weeks, during the Summer Term.

3. Courses in physics, chemistry, mathematics, Latin, and other subjects are offered covering the work of the high school. In this way a student who is slightly deficient at the end of the school year may prepare himself for college. These courses give no credit on the university books.

Courses of Study

During the summer of 1914 courses were offered in the following subjects: Chemistry, Home Economics, Education, English, French, German, History, Horticulture, Latin, Mathematics, and Physics. These courses are described in connection with the courses offered at the University during the remainder of the year.

DAILY ASSEMBLY

Each morning except Saturdays and Sundays the faculty and students meet in the Chapel at 10.15 for a brief assembly. A short religious service is held, including a song service, and an address is given on some topic of current interest.

LIBRARY

Throughout the Summer Term, the university library of 53,000 volumes, and the reading rooms containing about 300 periodicals and the Maine daily papers, are open from 9 A. M. to 12 M. and from 2 P. M. to 5 P. M., daily, except Saturday afternoon and Sunday. The library privileges ordinarily accorded university students, including the home use of books, are extended to students in the Summer Term.

LABORATORIES, MUSEUMS, AND OBSERVATORY

The laboratories of the departments of Physics and Chemistry are available for use of the students. There is ample provision for carrying on the various courses from the preparatory work to that of the graduate student. All necessary apparatus is supplied to the student without charge; a small charge is made to cover the cost of the articles used. The departments are well equipped with modern apparatus.

The Museum is illustrative of the rocks, flora, and fauna of Maine, and is open at stated periods for the use of the students.

The Observatory contains an eight-inch telescope, vertical circle, and other instruments of precision. The work of the observatory will be explained by Professor Hart in an evening lecture.

RECREATION

The athletic field of the University is accessible to those who wish to enjoy outdoor exercise, and two afternoons from four to six will be set aside each week for baseball games, and other athletic events. A tennis tournament also will be organized.

Under the management of a permanent committee appointed for that purpose, tramps, picnics, and longer trips to neighboring places of interest will be arranged, as well as more informal occasions on the campus where the students will have opportunity to meet each other and the members of the faculty.

For the further entertainment of the Summer Term students and their friends, the gymnasium will be open one evening of each week, where music will be furnished and opportunity afforded for informal social intercourse.

EXPENSES

Tuition

For residents of Maine, $12.00.

For residents of other states, $18.00.

An additional charge of $1 an hour is made for registration in excess of fifteen hours a week.

Tuition covers all charges for instruction up to fifteen hours a week, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories.

Rooms for Men

There are two dormitories for men, Oak Hall and Hannibal Hamlin Hall, connected by a covered passage-way. Rooms may be obtained for $2.00 a week for one person or $2.50 with two in a room. In Hannibal Hamlin Hall there are a few higher priced rooms.

Rooms for Women

The dormitory used for women students in the Summer Term on the campus is the Mt. Vernon House. The rates are $2.00 a week, one person in a room, or $2.50 with two persons in a room. This house of old colonial style, with its wide hall, open fire-place, and its broad piazza, looking out upon a beautiful view of the campus, is a desirable place for summer residence.

Meals

In the dining room of Hannibal Hamlin Hall meals will be served for $3.00 a week. Meals will be served in the Mt. Vernon House at $5.00 a week.

The University Inn, located in the village of Orono, is under university management and is open for summer students. Rooms in private families may be secured for those who prefer them.

Men who wish to bring their families should write early. Special effort will be made to secure suitable accommodations.

IN GENERAL

Prospective students are invited to consult the President, or any of the instructors, for further details regarding any of the courses, or upon any subject relating to the work. It is the wish of the authorities to offer such courses as will best appeal to the teachers of Maine, and others who desire to avail themselves of these privileges.

If there should be a considerable demand for other studies than those named, arrangements will be made to provide for them as far as practicable. In case the registration for any course offered falls below a certain minimum, it may be withdrawn. The list of instructors and the courses outlined in this catalog were for the summer of 1914. Unimportant changes are likely to be made in 1915.

ALUMNI ASSOCIATIONS

These associations have been organized for the purpose of extending the influence of the University, and keeping alive its spirit in various sections of the country. They have rendered efficient service in promoting the interest of the University.

GENERAL ASSOCIATION

President, Albert H. Brown, 1880, Old Town
Vice President, J. Harvey McClure, 1905, Bangor
Recording Secretary, Fremont L. Russell, 1885, Orono
Corresponding Secretary, Ralph K. Jones, 1886, Orono
Treasurer, James A. Gannett, 1908, Orono
Necrologist, James N. Hart, 1885, Orono

ADVISORY COUNCIL

MEMBERS AT LARGE

	Term expires
Perley B. Palmer, 1896, Orono	1914
Allen Rogers, 1897, Pratt Institute, Brooklyn, N. Y.	1914
Charles S. Bickford, 1882, Belfast	1915
[Vacancy]	1915
Edward H. Kelley, 1890, 2 Fairmount Park, East, Bangor	1916
C. Parker Crowell, 1898, 44 Central St., Bangor	1916
Albert H. Brown, 1880, Old Town	1917
George H. Hamlin, 1878, Orono	1917
Louis C. Southard, 1875, 601 Tremont Building, Boston, Mass.	1918
Charles E. Oak, 1876, 39 Hammond St., Bangor	1918

Representing the College of Agriculture

Whitman H. Jordan, 1875, Geneva, N. Y..... 1915

Representing the College of Law

Charles P. Connors, 1916, 49 Hammond St., Bangor 1916

Representing the College of Arts and Sciences

DeForest H. Perkins, 1900, City Hall, Portland 1917

Representing the College of Technology

George F. Black, 1886, 238 St. John St., Portland 1918

College of Law Alumni Association

President, Robert W. DeWolfe, 1907, Portland
Vice-President, Alfred A. Lang, 1904, Gloucester, Mass.
Recording Secretary, Mark A. Barwise, 1913, Bangor
Financial Secretary, James M. Gillen, 1913, Bangor
Treasurer, George H. Worster, 1905, Bangor

Alumni of the School and Teachers' Courses in Agriculture

President, Ralph L. Smith, 1912, Kennebunkport
Vice-Presidents, Walter S. Jones, 1912, Somerville, Mass., F. H. Bickford, 1906, Orono, M. D. Jones, 1913, Orono
Secretary-Treasurer, Perley F. Smith, 1912, East Brownfield
Executive Committee, Walter S. Jones, Somerville, Mass., Maurice A. Peabody, 1911, Exeter, W. Sherman Rowe, 1912, Auburn

West Maine Association

President, DeForest H. Perkins, City Hall, Portland
Secretary and Treasurer, Albert E. Anderson, 415 Congress St., Portland

Boston Association

President, Harry E. Sutton, 1909, 319 Washington St., Boston, Mass.
Secretary and Treasurer, Elmer J. Wilson, 1907, 15 Clough St., Lynn, Mass.

New York Association

President, Ralph E. Lord, 1906, 1 Gramercy Park, New York City
Secretary, A. W. Stephens, 1899, 169 Rutledge Ave., East Orange, N. J.
Treasurer, Guy E. French, ex-1905, 100 William Street, New York City

Western Association

President, Chas. A. Morse, 1879, Chief Engineer Rock Island Railroad, LaSalle Street Station, Chicago, Ill.

Vice-President, Arthur R. Lord, 1907, Care of Leonard Construction Co., 332 South Michigan Ave., Chicago, Ill.

Secretary and Treasurer, S. B. Lincoln, ex-1905, 619 First National Bank Building, Chicago, Ill.

Washington (D. C.) Association

President, L. A. Rogers, 1896, 3736 Oliver St., Chevy Chase

Secretary and Treasurer, H. W. Bearce, 1906, Bureau of Standards

Penobscot Valley Association

President, C. Parker Crowell, 1898, Central Street, Bangor

Secretary and Treasurer, J. H. McClure, 1905, 49 Hammond Street, Bangor

Pittsburgh Association

President, J. W. Brown, 1899, 1338 Walnut Street, Edgewood, Pa.

Secretary and Treasurer, C. D. Smith, 1905, 40th and Butler Sts., Pittsburgh, Pa.

Androscoggin Valley Association

President, Walter L. Emerson, 1909, Lewiston

Secretary, Charles B. Hosmer, 1911, Lewiston

Treasurer, Frank T. Powers, 1913, Lewiston

APPOINTMENTS

Speakers at the Junior Exhibition

Emma Gerhardts, Westbrook; Elizabeth Fitzgerald Hanly, Thomaston; Laura Pearl Hodgins, Calais; Carl Magnus, Biddeford; Florence Gertrude Smart, Bangor; Ross Harold Varney, Haverhill, Mass.; Rachel Helene Winship, Auburn.

Speakers at the Sophomore Prize Declamation Contest

Stephen Caldwell Clement, Belfast; Muriel Eva Colbath, Hampden; Fred Holmes Curtis, Addison; Marie Fredrika Foster, Bar Harbor George Harrison Garrison, Portland; Phillip Burr Grant, Bangor; Earl Stephen Merrill, Orono; Harry Elwood Rollins, Bangor.

Members of Phi Kappa Phi

Archie Asbury Adams, LaGrange; Louise Bartlett, Orono; Marion Stephanie Adams, Oldtown; Ernest LeRoy Goodspeed, Randolph; John Whittemore Gowen, Arlington, Mass.; Laura Pearl Hodgins, Calais; Fred Justin Lewis, Springfield, Mass.; Fernando Treat Norcross, Portland; Sidney Winfield Patterson, Winslow; Neil Carpenter Sherwood, Cherryfield; Philip Webb Thomas, Portland; James Roby Towle, Montpelier, Vermont; Carl Alfred Weick, Springfield; Max Lincoln Wilder, Augusta.

Members of Tau Beta Pi

1914

Archie Asbury Adams, LaGrange; Hermon Richard Clark, Townsend, Mass.; Alexander LeRoy Haggert, Franklin, Mass.; Fred Justin Lewis, Springfield, Mass.; Edward Michael Loftus, Bangor; Fernando

Treat Norcross, Portland; Wilfred Brown Pickard, Hopedale, Mass., Philip Webb Thomas, Portland; Max Lincoln Wilder, Augusta; Sherwood Howe Willard, Greenfield, Mass.

1915

James Joseph Brennan, Bangor; James Stuart Crandall, Malden, Mass.; Alleyn Maurice Goodwin, Saco; Ray Harrison Lindgren, Belfast; Edwin Barrett Newcomb, Cumberland Mills; Walker Merriam Philbrook, Rockport; Raymond Trussell Pierce, Bangor; Harry Algernon Randall, South Portland; Harvey Prescott Sleeper, Bangor; Robert Freeman Thurrell, Portland.

Members of Alpha Zeta

1915

Joseph Henry Bodwell, Methuen, Mass.; Raymond Henry Fogler, West Rockport; Joseph Batchelder Parker, Bangor; Paul Alanson Warren, Dover; Oscar Milton Wilbur, Pembroke.

1916

Karl Moody Currier, Brewer; Guy Casley Palmer, Patten; Lawrence Eugene Philbrook, Shelburne, N. H.

General Honors

Archie Asbury Adams, LaGrange; Louise Bartlett, Orono; Marion Stephanie Buzzell, Oldtown; Fred Justin Lewis, Springfield, Mass.; Sidney Winfield Patterson, Winslow; Neil Carpenter Sherwood, Cherryfield; Max Lincoln Wilder, Augusta; Sherwood Howe Willard, Greenfield, Mass.; Carolyn Imogen Wormwood, Bangor.

Honors in the College of Law

Ernest LeRoy Goodspeed, Randolph; Gladys Madeline Niles, Bangor; James Roby Towle, Portland; Carl Alfred Weick, Springfield.

Seniors Who Have Satisfactorily Completed the Course in Military

Alden Burgess Hayes, Bangor; Oswald Burnett Higgins, Sewaren, N. J.; Fernando Treat Norcross, Portland; Woodbury Freeman Pride, Auburn.

Appointments

Organization of the University Battalion of Cadets

1st Lieutenant Frank S. Clark, Coast Artillery Corps. U. S. Army
Professor of Military Science and Tactics

Staff and Non-commissioned Staff

Adjutant	Cadet 1st Lieut. R. H. G. Smith
In charge of Band	Cadet 1st Lieut. Park Elliot
Battalion Sergeant major	S. P. Danforth
Battalion Quartermaster-Sergeant	H. L. Bayer

Co. A	Cadet Captain	E. F. Hanson
	Cadet 1st. Lieut.	J. L. Gulliver
	Cadet 2nd. Lieut.	H. G. Lackee
Co. B	Cadet Captain	E. B. Coffin
	Cadet 1st. Lieut.	R. H. G. Smith
	Cadet 2nd. Lieut.	C. E. Dole
Co. C	Cadet Captain	E. W. Goodwin
	Cadet 1st. Lieut.	O. K. Edes
	Cadet 1st. Lieut.	A. L. Hamblen
Co. D	Cadet Captain	H. W. Coffin
	Cadet 1st. Lieut.	R. H. Boothby
	Cadet 2nd. Lieut.	E. S. Fraser
Co. E	Cadet Captain	L. P. Stewart
	Cadet 1st. Lieut.	A. A. Packard
	Cadet 2nd. Lieut.	C. M. DeWitt
Co. F	Cadet Captain	C. S. Erswell
	Cadet 1st. Lieut.	D. J. MacIntire
	Cadet 2nd. Lieut	O. F. Tarr

PRIZES AWARDED

Kidder Scholarship, Rachel Helene Winship, Auburn.

Western Alumni Association Scholarship, William Gustavus Wahlenberg, Suffield, Conn.

New York Alumni Association Scholarship, Harry Elwood Rollins, Bangor.

Junior Exhibiton Prize, Elizabeth Fitzgerald Hanly, Thomaston.

Honorary Public Speaking Society Prize (for second place in the Junior Exhibition), Albert Barnett Ferguson, New York City.

Sophomore Declamation Prize, Earl Stephen Merrill, Orono.

Franklin Danforth Prize, Sidney Winfield Patterson, Winslow.

Pittsburgh Alumni Association Scholarship, Fred Elton Chapman, Lake Hermon.

Kennebec County Prize, Herman Richard Clark, Townsend, Mass.; Edward Leonard Getchell, Waterville; Paul Elmer Murray, Skowhegan.

King Prize, Robert Freeman Thurrell, Portland.

Walter Balentine Prize, Raymond Henry Fogler, West Rockport.

Wingard Cup, Otis Carroll Lawry, Fairfield.

Holt Prizes, Paul Elmer Murray, Skowhegan; Herbert Nason Skolfield, Brunswick; Arthur Warren Abbott, Portland.

L. C. Bateman Prize, James Russell Hudson, Winthrop.

Lewiston Journal Prize, Roy Willam Peaslee, Randolph.

College of Technology Prize, Otis Carroll.

Father Harrington Prize, Elizabeth Fitzgerald Hanly, Thomaston.

The American Law Book Company Prize, Frederick Wakefield Small.

The Class of 1908 Commencement Cup, which is awarded each year to the class having the largest percentage of its membership present at Commencement, was won in 1909 by the classes of 1872 and 1873; in 1910 by the class of 1875; in 1911 by the class of 1875; in 1912 by the class of 1872; in 1913 by the class of 1872; in 1914 by the classes of 1872 and 1882.

The cup presented by the Senior Skulls to that Fraternity which has during the year maintained the highest average in scholarship was awarded in 1910 to Beta Theta Pi, in 1911 to Alpha Tau Omega, in 1912 to Phi Gamma Delta, in 1913 to Phi Gamma Delta, and in 1914 to Sigma Chi.

A cup was offered in 1912 by the Commencement Committee to be competed for during a period of ten years by the fraternities. It is to be awarded each year to that fraternity which has present at Commencement the largest proportion of its alumni, including non-graduates as well as graduates; members of the faculty and members of classes still in college are omitted from the reckoning. At the end of ten years the cup is to become the property of that fraternity which has won it the most times during the period. Only men's general fraternities of more than five years existence are eligible, but locals are not barred. In 1912 Phi Gamma Delta won, with Beta Theta Pi second and Kappa Sigma third. In 1913 Beta Theta Pi won, with Phi Kappa Sigma second and Phi Gamma Delta Third. In 1914 Phi Gamma Delta won, with Beta Theta Pi second and Delta Tau Delta, third.

COMMENCEMENT

The Commencement exercises of 1914 were as follows:

SATURDAY, JUNE 6

5.00 P. M. Annual Meeting of Phi Kappa Phi, Wingate Hall
6.00 P. M. Annual Banquet of Phi Kappa Phi, Hannibal Hamlin Hall
8.30 P. M. King Oratorical Prize Contest, the Chapel

SUNDAY, JUNE 7

10.30 A. M. Baccalaureate Address, by Guy Potter Benton, D. D., LL. D., President of the University of Vermont, the Chapel
4.30 P. M. Vesper Service, conducted by Rev. Henry L. Griffin, D. D., the Chapel

MONDAY, JUNE 8

9.30 A. M. Review of the Cadet Battalion, by His Excellency, Governor William T. Haines, and staff, followed by a competitive company drill, Alumni Field
2.00 P. M. Class Day Exercises, the Campus
2.30 P. M. Annual Meeting of the Alumni Advisory Council, the Library
4.00 to 6.00 P. M. At Home, at the fraternity houses on and adjacent to the campus, and at the Mount Vernon House
8.00 P. M. Class of 1909 Banquet, Conduskeag Canoe Club, Hampden
8.00 P. M. "The Learned Ladies" by the Maine Masque, the Gymnasium

TUESDAY, JUNE 9

9.00 A. M. Baseball Game (Five Innings), 1909-1914, Alumni Field
10.00 A. M. Concert by the Musical Organizations, the Chapel
1.30 P. M. Class of 1909 Frolic, Alumni Field
2.30 P. M. Baseball Game, Alumni-University, Alumni Field

2.30 P. M. Annual Meeting of the College of Law Alumni Association, Stewart Hall
4.30 to 6.30 P. M. Alumni Luncheon, the Gymnasium
6.00 P. M. Alumnae Luncheon, Mount Vernon House
6.15 P. M. Class of 1909 Sing, the Library steps
7.30 to 9.30 P. M. President's Reception, the Library
9.00 P. M. Fraternity Reunions, the fraternity houses

WEDNESDAY, JUNE 10

9.30 A. M. Commencement Exercises, the Chapel; Address by Hon. Thomas R. Marshall, LL. D., Vice Preseident of the United States
11.15 A. M. Planting the Ivy, by the Class of 1914, followed by other class exercises, the Campus
12.00 M. Commencement Dinner, The Gymnasium
3.00 P. M. Annual Meeting of the General Alumni Association, the Chapel
8.00 P. M. Commencement Ball, the Gymnasium

DEGREES CONFERRED

COLLEGE OF AGRICULTURE

Bachelor of Science

Arthur Warren Abbott (Horticulture) ..... Portland
Harold Purington Adams (Dairy Husbandry) ..... Bowdoinham
Charles Raymond Atwood (Forestry) ..... Rumford
Lewis John Brown (Agronomy) ..... Gorham, N. H.
Chauncey Wallace Lord Chapman (Forestry) ..... Old Town
Ralph Thompson Coffey (Horticulture) ..... South Brewer
Richard Foster Crocker (Biology) ..... Belfast
John Whittemore Gowen (Agronomy) ..... Arlington, Mass.
Howe Wiggin Hall (Horticulture) ..... Rockland
James Russell Hudson (Animal Husbandry) ..... Winthrop
Henry Augustus King (Horticulture) ..... Peabody, Mass.
Charles Raymond McKenney (Horticulture) ..... Orono
Leon Stanley McLauchlan (Agronomy) ..... Fort Fairfield
Preston Hussey Martin (Horticulture) ..... Fort Fairfield
William Collins Monahan (Agronomy) ..... South Framingham, Mass.
Paul Wheeler Monohon (Agronomy) ..... Biddeford
William Montgomery Morse (Animal Husbandry) ..... Waterford
Sidney Winfield Patterson (Dairy Husbandry) ..... Winslow
Roy William Peaslee (Agronomy) ..... Randolph
Woodbury Freeman Pride (Horticulture) ..... Auburn
Eugenia Rodick (Home Economics) ..... Bar Harbor
Neil Carpenter Sherwood (Animal Husbandry) ..... Cherryfield
Leon Campbell Smith (Forestry) ..... Topsham
Roland Earle Stevens (Biology) ..... Belfast
William Raymond Thompson (Biology) ..... Bangor
Wayland Dean Towner (Forestry) ..... Malden, Mass.

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

Louise Bartlett (Latin) ..... Orono
Estelle Beaupre (Romance Languages) ..... Bangor
Marion Stephanie Buzzell (Romance Languages) ..... Old Town
Charles Arthur Chase (Biology) ..... Sebec Station
Harold Vernon Cobb (Economics) ..... Livermore Falls
Mary Longfellow Cousins (Latin) ..... Brewer
Zu Chi Dage (Chemistry) ..... Soo Chow, China
Albert Felton (Chemistry) ..... Parsons, W. Va.
Albert Barnett Ferguson (Biology) ..... New York, N. Y.
Norman Richards French (Physics) ..... Fort Fairfield
Everett Burton Harvey (English) ..... Bar Harbor
Theodore Winthrop Haskell (Economics) ..... Westbrook
Oswald Burnett Higgins (Physics) ..... Sewaren, N. J.
Aileene Browne Hobart (English) ..... Milford
Laura Pearl Hodgins (Latin) ..... Calais
Carrol Clair Jones (Economics) ..... Solon
Marion Luella Jordan (Latin) ..... Old Town
Albert Lincoln King (Economics) ..... South Paris
Warren Stanhope Lucas (Mathematics) ..... Auburn
Esca Allan Maines (Education) ..... Norway
Frank Albert Morris ..... Old Town
George Burgess Newman (Biology) ..... Fryeburg
Anna Belle Perkins (Romance Languages) ..... North Brooksville
Arthtur Amos St. Onge (Romance Languages) ..... Dover
Allan Frank Sawyer (Economics) ..... Milbridge
George Edward Sinkinson (Economics) ..... Somersworth, N. H.
Carolyn Imogen Wormwood (English) ..... Bangor
George James York (History) ..... Yarmouthville

COLLEGE OF LAW

Bachelor of Laws

Charles Drummond Bartlett ..... Bangor
Carl Adams Blackington ..... Rockland
Samuel Cohen ..... Bangor
Frank Gerald Driscoll ..... Concord, N. H.

Maurice Sylvester Cerrish ..... Melrose, Mass.
Ralph Rigby Glass (Graduate U. S. Military Academy, 1904) ... Bangor
Edward Isaac Gleszer ..... Hartford, Conn.
Ernest Leroy Goodspeed (A. B., Bowdoin College, 1909) .... Randolph
Clyfton Hewes ..... Saco
Charles Edward Leonard ..... Haverhill, Mass.
Frank Milton Libby ..... Portland
James Barry Mountaine ..... Bangor
Gladys Madeline Niles ..... Bangor
James Gorman O'Connor ..... Taunton, Mass.
Arthur Willis Patterson ..... Castine
Harvey Roscoe Pease ..... Cornish
Fred Wakefield Small ..... Steep Falls
Frank Elwyn Southard (B. A., University of Maine, 1910) .... Auburn
James Roby Towle.....Montpelier, Vt.
Carl Alfred Weick ..... Springfield
Ralph Kimball Wood ..... Bangor

COLLEGE OF TECHNOLOGY

Bachelor of Science

Archie Asbury Adams (Mechanical Engineering) ..... LaGrange
Clifton Lowery Allen (Civil Engineering) ..... Mount Vernon
Robert Wilbur Andrews (Civil Engineering ..... West Pembroke
Philip Hanson Bean (Civil Engineering) ..... Saco
Ira Miller Bradbury (Civil Engineering) ..... Gorham
Paul De Costa Bray (Chemistry) ..... Turner
Dwight Stillman Chalmers (Electrical Engineering) ..... Albion
Hermon Richard Clark (Electrical Engineering) ..... Townsend, Mass.
Fred Earle Dearborn (Chemistry) ..... Penacook, N. H.
Harold Lee Dinsmore (Electrical Engineering) ..... Hebron
Leon Albion Field (Mechanical Engineering) ..... Biddeford
David Albert Foster (Civil Engineering) ..... Ellsworth Falls
Ernest Eugene Fowler (Mechanical Engineering) ..... Hartford, Conn.
Harold Colby Gerrish (Electrical Engineering) ..... Bangor
Edward Leonard Getchell (Electrical Engineering) ..... Waterville
Alexander Leroy Haggart (Civil Engineering) ..... Franklin, Mass.
Alden Burgess Hayes (Mechanical Engineering) ..... Bangor
Thomas Carol Higgins (Civil Engineering) ..... Bar Harbor
Frederick Sawtelle Jones (Electrical Engineering) ..... Augusta
John Norman Junkins (Mechanical Engineering) ..... Milford, N. H.

Charles Merrill Kelly, Jr. (Electrical Engineering) ..... Ipswich, Mass.
William Earle Kimball (Civil Engineering) ..... South Paris
Fred Justin Lewis (Civil Engineering) ..... Springfield, Mass.
Arthur Clarence Libby (Civil Engineering) ..... Scarboro
Edward Michael Loftus (Chemical Engineering) ..... Bangor
Nicholas Philip Makanna (Civil Engineering) ..... Bangor
Mario Martinelli (Chemistry) ..... Wareham, Mass.
Paul Elmer Murray (Electrical Engineering) ..... Skowhegan
Fernando Treat Norcross (Civil Engineering) ..... Portland
Mark Pendleton (Electrical Engineering) ..... Islesboro
Wilfred Brown Pickard (Civil Engineering) ..... Hopedale, Mass.
Lester Lary Richardson (Civil Engineering) ..... Old Orchard
Gerald Arlester Rounds (Civil Engineering) ..... Portland
Herbert Nason Skolfield (Civil Engineering) ..... Brunswick
Philip Webb Thomas (Civil Engineering) ..... Portland
Charles Herbert Tipping (Mechanical Engineering) .. Claremont, N. H.
Guy Raymond Wescott (Civil Engineering) ..... Rumford
Max Lincoln Wilder (Civil Engineering) ..... Augusta
Sherwood Howe Willard (Electrical Engineering) ... Greenfield, Mass.
Frederick Shaw Youngs (Civil Engineering) ..... Bangor

Pharmaceutical Chemist

Arthur George Baldwin ..... Reading, Mass.
Francis Edward Fortier ..... Orono
Thomas Augustine Lynch ..... Bangor
Paul Ouilette ..... Caribou
George Boss Paul ..... Dover, N. H.

ADVANCED DEGREES

Martin Andrew Nordgaard (A. B., Saint Olaf College, 1904) (Mathematics) ..... Orono
Irving Osgood Scott, (B. S., Dartmouth College, 1910) (Education) Hinckley

Master of Science

Clarence Wallace Barber, (B. S., University of Maine, 1912) (Biology) Orono

Master of Laws

Mark Alton Barwise, (LL. B., University of Maine, 1913) ..... Bangor
Arthur Jean Baptist Cartier, (LL. B., University of Maine, 1909) Biddeford

Walter Herbert Foster, (LL. B., University of Maine, 1905)
Boston, Mass.
Ernest Linwood Seavey, (LL. B., University of Maine, 1908)
San Diego, Cal.

PROFESSIONAL DEGREES

Chemical Engineer

Albert Davis Conley, (B. S., University of Maine, 1911) .. Passaic, N. J.

Civil Engineer

Raymond Earle Davis, (B. S., University of Maine, 1911) .. Urbana, Ill.
Clarence McLellan Weston, (B. S., University of Maine, 1908)
New York, N. Y.

CERTIFICATES

Home Economics

Edith Flint ..... Baldwin
Ethel Elizabeth Harrigan ..... Bangor
Ruth Jackman ..... Vanceboro
Mary Frey Leonard ..... Lewiston

School Course in Agriculture

Alden Western Bradford ..... Sebec Station
John Carroll Hawkes ..... South Windham
Joseph Henry Johnson ..... Waltham, Mass.
Harold Joseph Shaw ..... Sanford
Alfred Henry Sidelinger ..... Nobleboro
Sylvanus Cobb Small ..... Charleston
Jones Harold Talbot ..... East Machias
Floyd Verrill ..... Brunswick
Linton Bartlett Ward ..... Shirley, Mass.
Carroll Eugene Wilcox ..... Morgan, Vt.
Clyde Sumner Wilcox ..... Morgan, Vt.

CATALOG OF STUDENTS

Major subjects are indicated as follows: Ag. Agronomy, An. Animal Industry, Bc. Biological Chemistry, Bl. Biology, Ch. Chemistry, Ch. Eng. Chemical Engineering, Ce. Civil Engineering, Dh. Dairy Husbandry, Es. Economics, Ed. Education, Ee. Electrical Engineering, Eh. English, Fy. Forestry, Gm. German, Gk. Greek, Hy. History, He. Home Economics, Ht. Horticulture, Lt. Latin, Ms. Mathematics, Me. Mechanical Engineering, Ph. Poultry Husbandry, Pm. Pharmacy, Pl. Philosophy Ps. Physics, Rm. Romance Languages.

GRADUATE STUDENTS

Barrows, Henry Robbins, Ph. B., M. S., Bl. Hamilton College, 1906-1912	*Clinton, N. Y.*	106 H. H. Hall
Beaupré, Estelle, B. A., Gm. University of Maine, 1914	*Bangor*	3 Mill Street
Buzzell, Marion Stephanie, B. A., Ed. University of Maine, 1914	*Old Town*	Old Town
Clark, Frank Sheldon, B. S., Ee. Norwich University, 1908	*Orono*	97 Main Street
Day, George Willis, B. S., Ch. Dartmouth College, 1905	*East Waterboro*	
Everett, Sarah Ruth, A. B., Ch. Boston University, 1911	*Worcester, Mass.*	
Floyd, Raymond, B. A., Gm. University of Maine, 1913	*Brewer*	108 H. H. Hall
French, Norman Richards, B. S., Ps.	*Fort Fairfield*	113 Main Street
Gowen, John Whittemore, B. S., Bl. University of Maine, 1914	*Arlington, Mass.*	301 H. H. Hall
Grant, Charles Harold, B. A., Ed. University of Maine, 1911	*Bangor*	

Jamison, Orville Alvin, B. Sc., Bl. *Orono* Main Street
Ohio State University, 1912

Kelley, Margaret June, B. A., Gm. *Bangor* Bangor
University of Maine, 1912

Lanpher, Stacy Clifford, B. A., Rm. *Foxcroft*
University of Maine, 1908

Lucas, Hoyt Dennis, B. Sc., Ch. *Springfield, Mass.* University Inn
Massachusetts Agricultural College, 1914

Monohon, Paul Wheeler, B. S., Ag. *Biddeford* H. H. Hall
University of Maine, 1914

Nordgaard, Martin Andrew, A. B., *Orono* College Street
A. M., Ms.
St. Olaf College, 1904, University of Maine, 1[illegible]

O'Connor, James Gorman, LL. B., *Bangor* 396 Hammond Street
Law
University of Maine, 1914

Patterson, Sidney Winfield, B. S., *Winslow* 301 H. H. Hall
An.
University of Maine, 1914

Pease, Harvey Roscoe, LL. B., Law *Cornish* The Hallock
University of Maine, 1914

Pride, Woodbury Freeman, B. S., *Auburn* 206 H. H. Hall
Bl.
University of Maine, 1914

Redman, Ralph Woodbury, B. S., *Orono* 6 Myrtle Street
Es.
University of Maine, 1912

Sawyer, Edward Eugene, B. S., Ch. *Old Town* Old Town
University of Maine, 1912

Sherwood, Neil Carpenter, B. S., Bl. *Cherryfield* Dairy Bldg.
University of Maine, 1914

Spear, Joseph, B. A., Ms. *Malden, Mass.* University Inn
Harvard University, 1912

Stanly, Winthrop Hamor, B. A., Ch. *Hull's Cove*
University of Maine, 1910

Stephens, Aberta, Ph. B., Hy. *Wapello, Ia.*
Iowa Wesleyan College, 1911

Tobey, Elmer Robert, B. S., Ch. *Orono* Pond Street
University of Maine, 1911

Transue, Vincent Milo, B. S., M. S., *Orono* 28 Bennoch Street
Ps.
Pennsylvania State College, 1912, 1913

Webb, Antoinette Treat, B. A., Eh. *Orono* 1 Mill Street
University of Maine, 1912

Whiteside, Thomas, A. B., S. T. B., Es. *Orono* Oak Street
Boston University, 1889, 1891

Wilbur, Walter Edward, B. S., M. S., Ms. *Orono* 5 Pine Street
University of Maine, 1908, 1911

Woods, Roscoe, A. B. *Vanarsdell, Ky.* Orono
Georgetown College, 1914

Wormwood, Alice Eleanor, B. A. Lt. *Bangor*
Wellesley College, 1913

SENIORS

Aageson, Wilbur Cole, Dh.	*Thomaston*	Park Street
Adams, James Abraham, Ms.	*Orono*	35 Mill Street
Allen, Charles Stanley, Ce.	*Augusta*	Σ X House
Bailey, Harold Perry, Ch.	*Dexter*	Β Θ Π House
Baker, David Seth, Ce.	*Caratunk*	Α Τ Ω House
Banks, Merton Ford, Ce.	*Biddeford*	Σ Α Ε House
Beale, Douglas Marsh, Ht.	*Orono*	Peters Street
Bernheisel, George Hench, An.	*New Bloomfield, Pa.*	Φ Κ Σ House
Beverage, Harold Henry, Ee.	*North Haven*	Σ Α Ε House
Bickford, Miretta Lydia, Lt.	*Orono*	Main Street
Blaisdell, Lawrence Allen, Ee.	*Lynn, Mass.*	Σ Ν House
Bodwell, Joseph Henry, An.	*Methuen, Mass.*	Σ Α Ε House
Bowler, William Edward, Ee.	*Spencer, Mass.*	404 H. H. Hall
Bragg, Alfred Orman, Ch. Eng.	*Portland*	111 Oak Hall
Brennan, James Joseph, Ch. Eng.	*Bangor*	7 Birch Street, Bangor
Brennan, Rosemary Agnes, Gm.	*Bangor*	Balentine Hall
Brockway, Earle Maurice, Fy.	*Dexter*	Σ Α Ε House
Brown, Winthrop Blakely, Ch.	*Portland*	88 Main Street
Browning, Neva, Eh.	*Orono*	Orono
Buck, William Harold, Ce.	*Ansonia, Conn.*	201 Oak Hall
Chapman, Fred Elton, Ee.	*Lake Hermon*	408 H. H. Hall
Clark, Robert Pinkham, Es.	*Lincoln*	Α Τ Ω House
Clifford, Ernest Alfred, Ce.	*Brunswick*	Α Τ Ω House
Coffin, Everett Bickford, Ce.	*Brunswick*	Φ Η Κ House
Colbath, Muriel, Eh.	*Hampden*	Hampden

Coombs, Olive Erdine, Lt.	*North Islesboro*	Park Street
Cooper, Harold, Me.	*Auburn*	Θ X House
Coyne, Albert Leo, Ce.	*Worcester, Mass.*	Δ T Δ House
Conners, Edward Warren, Ce.	*Old Town*	Old Town
Crandall, James Stuart, Ce.	*Malden, Mass.*	Σ X House
Creighton, Maynard Joshua, Ch. Eng.	*Thomaston*	Φ Γ Δ House
Crispin, Russell Milton, Ce.	*West Somerville, Mass.*	Σ X House
Croteau, Leon John, Ce.	*Holbrook, Mass.*	Λ X Δ House
Davis, Lucretia Almira, Rm.	*Old Town*	Balentine Hall
Dolan, Walter James, Ch.	*Worcester, Mass.*	Θ X House
Donahue, Norman Sylvester, Ag.	*Luthersburg, Pa.*	K Σ House
Dore, Edward Albert, Ch. Eng.	*Bangor*	408 H. H. Hall
Douglas, Chauncey Hazen, Fy.	*Peabody, Mass.*	407 H. H. Hall
Douglass, Raymond Donald, Ms.	*Gorham*	Δ T Δ House
Doyle, Joseph Edward, Bl.	*Danvers, Mass.*	Θ X House
Easson, Ralph Barrows, Ph.	*South Paris*	Φ K Σ House
Elliott, Park, Ee.	*Foxcroft*	Σ A E House
Emmons, Norman Eudell, Ee.	*Chester, Conn.*	109 H. H. Hall
Fish, Harold Mahlon, Ce.	*Farmington*	Λ X Δ House
Fletcher, Maurice Arthur, Gm.	*Wilton*	Λ X Δ House
Flower, Mildred Webster, Lt.	*East Kingston, N. H.*	Balentine Hall
Fogg, Harry Willard, Fy.	*Hulls Cove*	Σ N House
Fogler, Raymond Henry, Bl.	*West Rockport*	Σ X House
Fowler, Henry Winslow, Fy.	*Berlin, N. H.*	Θ X House
Gerhardts, Emma, He.	*Westbrook*	Mt. Vernon House
Glover, John White, Me.	*Rockland*	Σ X House
Goldsmith, Chester Hamlin, Ch.	*Beverly, Mass.*	Σ X House
Goodwin, Earl Corson, Es.	*Oakland*	Λ T Ω House
Goodwin, Alleyn Maurice, Ee.	*Saco*	K Σ House
Gordon, Forest Chandler, Ch. Eng.	*Auburn*	Φ Γ Δ House
Grey, Ethel Mae, Lt.	*South Penobscot*	Mt. Vernon House
Gulliver, James Lucius, Es.	*Auburn*	B Θ Π House
Hall, Preston Martin, Ch. Eng.	*Taunton, Mass.*	Φ Γ Δ House
Hamel, Leslie Atheson, Ag.	*Portland*	202 Oak Hall
Hanly, Elizabeth, Eh.	*Thomaston*	University Inn
Haskell, Lawrence Herbert, Ce.	*Lynn, Mass.*	406 H. H. Hall
Hatch, Frederic Boynton, Ce.	*Pemaquid Harbor*	Λ X Δ House
Hayford, Herbert Wilder, Gm.	*Dover*	Δ T Δ House
Hill, William Barlow, Fy.	*Gorham*	K Σ House
Hines, Mary Elizabeth Burns, Lt.	*Middletown, Conn.*	

		Mt. Vernon House
Hodgkins, Harold Eugene, Ee.	*Waterville*	Φ H K House
Hodgkins, Herbert Charles, Ee.	*Waterville*	Φ H K House
Holyoke, Margaret Lillis, Bl.	*Brewer*	Mt. Vernon House
Hutchinson, Albert Fletcher, Ch.	*North Dexter*	Σ X House
Ingalls, Everett Palmer, Ce.	*Bridgton*	B Θ Π House
Jones, Harold Libby, Ce.	*Corinna*	Φ H K House
Kimball, Roland Gerry, Pm.	*Norway*	Φ K Σ House
Leavitt, Harold Walter, Ce.	*Monmouth*	211 H. H. Hall
Lindgren, Ray Harrison, Ce.	*Belfast*	Φ K Σ House
Luther, Harris Gates, Me.	*Hadlyme, Conn.*	109 H. H. Hall
Lyon, Clement Ames, Ag.	*East Bridgwater, Mass.*	Σ N House
Mace, Asa Russell, Ce.	*Aurora*	Φ K Σ House
Magnus, Carl, Ch. Eng.	*Biddeford*	Σ N House
Martin, William Hope, Bl.	*Carlisle, Pa.*	Σ X House
McKenney, Maurice Roy, Ee.	*Stillwater*	Stillwater
Mellen, William Henshaw, Me.	*Athol, Mass.*	Campus
Merrill, Gladys Helen, Rm.	*Orono*	Campus
Mullaney, James Edward, Ce.	*Somerville, Mass.*	Θ X House
Norton, Chester Harold, Fy.	*Chelsea, Mass.*	Θ X House
Oak, Malcolm Hayford, Ch.	*Caribou*	B Θ Π House
Parker, Joseph Batchelder, Dh.	*Bangor*	99 Kenduskeag Ave., Bangor
Parks, David Weaver, Ps.	*Fort Fairfield*	211 H. H. Hall
Patten, Mountford Elmes, Fy.	*Carmel*	Δ T Ω House
Pettey, Willis Thurston, Ph.	*North Dartmouth, Mass.*	Δ T Δ House
Philbrook, John Harvey, Dh.	*Corinna*	Φ H K House
Philbrook, Philip Edwin, Me.	*Woodfords*	Δ T Ω House
Philbrook, Walker Merriam, Ee.	*Rockport*	201 H. H. Hall
Pierce, Raymond Trussell, Ee.	*Bangor*	Σ Δ E House
Pinkham, Lloyd Francis, Es.	*Lewiston*	211 Oak Hall
Randall, Harry Algernon, Ee.	*South Portland*	Σ N House
Randall, James Stuart, Ce.	*Whitman, Mass.*	Φ Γ Δ House
Redman, William Wason, Ag.	*Dedham, Mass.*	Σ X House
Rogers, Walter Henry, Ch.	*Topsham*	Φ H K House
Sawyer, Leon George, Ee.	*Bridgton*	204 H. H. Hall
Schwey, Abraham Ira, Ht.	*Portland*	401 H. H. Hall
Shaw, Merle Branard, Ch. Eng.	*Orono*	Park Street
Sleeper, Harvey Prescott, Ee.	*Bangor*	Φ K Σ House
Slocum, Paul Frederick, Ce.	*New York City*	Φ Γ Δ House
Smart, Frances Gertrude, Rm.	*La Grange*	Mt Vernon House

Smith, Allen G., Me.	*Blue Hill*	Park Street
Stewart, Loren Prescott, Ce.	*Thorndike*	Σ A E House
Thurrell, Robert Freeman, Ee.	*Portland*	Φ Γ Δ House
Titcomb, Harry Alton, Me.	*South Paris*	Φ K Σ House
Tolman, Lewis Brewster, Es.	*Bangor*	Φ Γ Δ House
Treat, Gladys, Gm.	*Winterport*	Balentine Hall
Varney, Ross Harold, Es.	*Haverhill, Mass.*	Φ K Σ House
Walker, James Clifford, Ps.	*Portland*	Θ X House
Walters, Philip Harris, An.	*Readfield*	Campus
Wark, William Lucas, Me.	*Cumberland Mills*	Σ N House
Warren, Paul Alanson, Bl.	*Dover*	Δ T Δ House
Weeks, Jedediah Earle, Ce.	*Wells*	207 H. H. Hall
Welch, Gerald Cushman, Ce.	*Oakland*	A T Ω House
White, Harold Chandler, Ch. Eng.	*Bangor*	K Σ House
Whitney, Thomas Boardman, Ce.	*Caribou*	Campus
Wilbur, Oscar Milton, Ht.	*Pembroke*	Campus
Williams, Harry Duncan, Ce.	*Readfield*	Σ A E House
Winship, Rachel, He.	*Auburn*	Mt. Vernon House
Woodsum, Edmund Nugent, Me.	*Stillwater*	Stillwater
Woodward, George Thomas, Me.	*Lisbon Falls*	Φ H K House

JUNIORS

Aikins, Frederick Harlow, Dh.	*So. Windham*	Park Street
Ames, Ivan Cecil, Ce.	*North Haven*	B Θ Π House
Ashton, Harold Dudley, Ce.	*Springfield, Mass.*	K Σ House
Atwater, Donald Vince, Bl.	*Fort Fairfield*	Σ X House
Barrett, Basil Edward, Es.	*Bluehill*	Σ X House
Barrows, Lewis Orin, Pm.	*Newport*	B Θ Π House
Barry, James Edward, Es.	*Bangor*	168 Grove St., Bangor
Bell, Roger Warren, Ce.	*Arlington, Mass.*	K Σ House
Blackman, Charles Leon, An.	*Peak Island*	Park Street
Blanchard, Ensor Harding, Ce.	*Buenos Aires, Argentina, S. A.*	Forest Avenue
Blanchard, Robert Germain, Ce.	*Cumberland Center*	Λ X Λ House
Blood, Lewis Henry, Ch.	*Foxcroft*	Σ A E House
Bonney, Timothy Doten, Ms.	*Mexico*	Θ X House
Boothby, Horace Everett, Ht.	*Reading, Mass.*	Δ T Δ House
Bower, Arthur John, An.	*Methuen, Mass.*	House
Bradbury, Burke, Ee.	*Old Town*	Φ Γ Δ House
Brown, Brooks, Ag.	*Dover*	Δ T Δ House
Brown, Walter True, Me.	*West Bath*	Peters Street

Buckley, Forest LeRoy, Ce.	*South Leeds*	Park Street
Butters, Arthur Edwin, Es.	*Old Town*	Old Town
Causland, Kenneth Martin, Ee.	*Freeport*	Κ Σ House
Chadbourne, Ava Harriet, Ed.	*Mattawamkeag*	Mt. Vernon House
Clement, Stephen Caldwell, Eh.	*Belfast*	Φ Η Κ House
Coffin, Harold Wilhelm, Ee.	*Portland*	Θ Χ House
Colbath, Orman Schuyler, Ag.	*Hampden*	Δ Τ Δ House
Colvin, Zella Elizabeth, Ms.	*Williamsburg, Ind.*	Mt. Vernon House
Condon, Guy Berwyn, Es.	*South Penobscot*	Σ Χ House
Cookson, Ernest Loren, B. Pd.	*Albion*	Bennoch Street
Crimmin, Erlon Victor, Ee.	*Winterport*	107 Oak Hall
Currier, Doris, Gm.	*Bangor*	Mt. Vernon House
Currier, Harold Newcomb, Ch.	*Brewer*	9 Prospect Street, Brewer
Currier, Karl Moody, Ch. Eng.	*Brewer*	Φ Κ Σ House
Curtis, Fred Holmes, Gm.	*Addison*	Α Τ Ω House
Damren, Fred Llewellyn, Bl.	*Auburn*	Φ Η Κ House
Danforth, Stephen Paul, Eh.	*Foxcroft*	Θ Χ House
Davis, Arthur Linwood, Ee.	*Auburn*	Θ Χ House
DeBeck, Mary Muriel, Lt.	*Franklin*	Balentine Hall
DeWitt, Carroll Melbourne, Es.	*Brewer*	Φ Κ Σ House
Dodge, John Maynard, Me.	*Boothbay*	Φ Η Κ House
Dole, Charles Edmund, Es.	*Bangor*	Β Θ Π House
Dorsey, Llewellyn Morse, Dh.	*Augusta*	Σ Α Ε House
Driscoll, Michael Columbus, Rm.	*North Abington, Mass.*	Σ Ν House
Eddy, Emery Davis, Bl.	*Bangor*	Φ Γ Δ House
Edes, Omar Kelsey, Es.	*Dexter*	Φ Γ Δ House
Edminster, Winfred Herbert, Bl.	*Dixmont*	412 H. H. Hall
Elliott, James Carroll, Dh.	*North Rumford*	403 H. H. Hall
Emerson, Walter Davis, Me.	*Orono*	Orono
Fairchild, Thomas Everett, Ph.	*Livermore Falls*	Φ Κ Σ House
Falvey, John Michael, Ch.	*South Berwick*	Α Τ Ω House
Fannon, Ralph William, Ch. Eng.	*Appleton, Wis.*	Φ Γ Δ House
Folsom, Charles Herbert, Ce.	*Dexter*	308 H. H. Hall
Forsyth, Nathaniel Frederick, Es.	*Orrington*	Orrington
Foster, Marie Fredrika, Ms.	*Sorrento*	Balentine Hall
Fraser, Elwood Stuart, Dh.	*Peak Island*	Park Street
Frawley, Isabel Frances, Rm.	*Bangor*	Balentine Hall
Gowell, Roger Locke, Dh.	*Poland*	201 Oak Hall
Grant, Benjamin Elwell, Es.	*Cumberland Mills*	Σ Χ House

Grant, Philip Burr, Lt.	*Unity*	38 Court St., Bangor
Gray, Frank William, Jr., An.	*Jacksonville*	Δ T Δ House
Greenleaf, Florence Evelyn, He.	*Auburn*	Mt. Vernon House
Ham, Everett Goss, Ch. Eng.	*Foxcroft*	409 H. H. Hall
Hamblen, Archelaus Lewis, Ht.	*Gorham*	Δ T Δ House
Hickson, Eugene Francis, Ch. Eng.	*Bangor*	74 Fern St., Bangor
Hight, Vernon Ivan, Ce.	*Caribou*	Φ K Σ House
Hunt, Lawrence Milliken, Ch. Eng.	*Old Town*	Φ Γ Δ House
Jones, Marguerite, He.	*Waldoboro*	Balentine Hall
Jordan, Maynard Fred, Ms.	*Islesford*	103 H. H. Hall
Kiernan, John Henry, Ms.	*Wareham, Mass.*	Φ H K House
Kirk, George Edwin, Es.	*Bar Harbor*	Σ N House
Kriger, Lewis Herman, An.	*Portland*	412 H. H. Hall
Kritter, Julius Henry, Ce.	*Bradford, Mass.*	Λ T Ω House
Lackee, Hobart Goold, Me.	*Portland*	Δ T Δ House
Lane, Charles Kent, Ch. Eng.	*Rockland, Mass.*	K Σ House
Lawry, Otis Carroll, Ch. Eng.	*Fairfield*	B Θ Π House
Leecock, John Thomas, Ch.	*North Andover, Mass.*	Δ T Δ House
Lewis, Benjamin West, Ee.	*Boothbay Harbor*	B Θ Π House
Libby, Clarence Earl, Ch. Eng.	*Albion*	308 H. H. Hall
Loring, Fred Perley, Ag.	*West Pownal*	Σ A E House
Lovely, Harry Richard, Fy.	*Gardiner*	Φ Γ Δ House
McAvey, Liela Joyce, He.	*Bangor*	Mt. Vernon House
Macdonald, Irving Clifford, Ch. Eng.	*Portland*	Φ H K House
McLaughlin, George William, Ms.	*Harrington*	25 Mill Street
McLaughlin, James Blaney, Ms.	*Harrington*	210 H. H. Hall
Mansfield, Everett Keith, Ch. Eng.	*Fryeburg*	Θ X House
Martin, Blynn, Es.	*New Gloucester*	Θ X House
Mayers, Howard Winfield, Ce.	*Dresden*	Δ T Δ House
Merrill, Earl Stephen, Bl.	*Orono*	Campus
Moody, Charles Leo, Ht.	*North Monmouth*	108 Oak Hall
Moore, Ralph Lee, Ce.	*Hallowell*	Σ A E House
Moore, Robert McGregor, Me.	*Biddeford*	Φ K Σ House
Morris, Lester George, Dh.	*Bingham*	Λ T Ω House
Morrison, Mildred Cora, Rm.	*Bar Harbor*	Balentine Hall
Mulloney, Lawrence Edmund, Me.	*Portland*	Λ T Ω House
Nickerson, Arno Wilbur, Ch. Eng.	*Brewer*	Θ X House
Norris, Helen Mary, Gm.	*Wayne*	Mt. Vernon House
Noyes, Garth Albert, Ee.	*Orono*	Orono
Nugent, William Robert, Ce.	*Portland*	402 H. H. Hall

O'Neil, Harry Dennis, Ce.	*Bangor*	Σ A E House
O'Rourke, Francis, Ch. Eng.	*Saco*	Peters Street
Packard, Ansel Alba, Ee.	*Belfast*	Λ X A House
Packard, Marlborough, Ce.	*Sebec Lake*	103 H. H. Hall
Palmer, Guy Casley, An.	*Patten*	K Σ House
Park, Minnie May, He.	*Orono*	Orono
Peabody, Myron Columbus, Dh.	*Exeter*	Σ X House
Perkins, Edward Adolphus, Ee.	*Old Orchard*	Σ X House
Philbrook, Lawrence Eugene, An.	*Shelburne, N. H.*	B Θ H House
Pierson, Howard Lester, Ch. Eng.	*Lisbon Falls*	309 H. H. Hall
Plummer, Marion Elizabeth, He.	*Old Town*	Mt. Vernon House
Potter, Elmer Deming, Eh.	*Topsham*	311 H. H. Hall
Prentice, William Henry, Jr., Me.	*Round Pond*	302 Oak Hall
Purington, Clinton Everett, Es.	*Portland*	K Σ House
Rendall, Raymond Eaton, Fy.	*Melrose, Mass.*	Θ X House
Robinson, Madeline, Rm.	*Bangor*	468 Main Street, Bangor
Roderick, Thaddeus Louis, Ed.	*Farmington*	Λ X A House
Rollins, Harry Elwood, Ed.	*Bangor*	Φ K Σ House
Rudman, Samuel, Ce.	*Bangor*	159 Hancock Street, Bangor
Ruffner, Charles William, Dh.	*Bangor*	K Σ House
Russell, Sibyl Lois, He.	*Orono*	80 Main Street
Sanborn, Oscar Harold, An.	*Weld*	Campus
Sawyer, Grace Ruth, Rm.	*Old Town*	Old Town
Shaw, Earle Eaton, Fy.	*Orono*	College Street
Sherman, Albion Franklin, Es.	*Bar Harbor*	K Σ House
Skillin, Clifford Augustus, Me.	*Portland*	Θ X House
Small, Norman Clifford, Ce.	*Farmington*	Φ K Σ House
Somes, Raymond Percival, Es.	*Southwest Harbor*	Φ K Σ House
Stone, Harry Edward, Ee.	*Cornish*	16 Main Street
Tarr, Omar Fred, Ch. Eng.	*Auburn*	Θ X House
Thompson, Dorothy, Gm.	*Orono*	Main Street
Thompson, Gladys, Gm.	*Orono*	Main Street
Totman, James Emmons, Ag.	*Providence, R. I.*	Φ H K House
Webber, Walter Waitstill, Ch.	*Lewiston*	B Θ Π House
Whittemore, James Arthur, Fy.	*Bangor*	B Θ Π House
Whittier, John Lowell, An.	*Biddeford*	Φ K Σ House
Winship, Evelyn, Eh.	*Auburn*	Mt. Vernon House

SOPHOMORES

Abbott, Stephen Boothby, Ch. Eng.	*Waterville*	Orono
Amos, Luther Newell, Ee.	*Houlton*	Bennoch Street
Andrews, Harold Pierce, Fy.	*Monmouth*	103 Oak Hall
Barnes, John Lycurgus, Ce.	*Intervale, N. H.*	Θ X House
Bartlett, Burton Elliott, Ch.	*Orono*	College Street
Bayley, Charles William, Ag	*Wells*	108 Oak Hall
Beal, George Napolean, Bl.	*Jonesport*	Pleasant Street
Beckler, Warren Bigelow, Jr., Ch. Eng.	*Auburn*	301 Oak Hall
Benson, Clyde Allen, Ch. Eng.	*Winthrop*	Θ X House
Berger, Samuel Solomon, Ch. Eng.	*Lawrence, Mass.*	411 H. H. Hall
Bernstein, Louis Abraham, Ce.	*Auburn*	202 Oak Hall
Berry, Leroy Nahum, Ag.	*South Bridgton*	204 H. H. Hall
Blanchard, Arthur Nile, Ag.	*Cumberland Center*	Λ X Λ House
Brasseur, Ralph Baldwin, Ce.	*Bradford, Mass.*	Φ K Σ House
Brawn, Earl Robertson, Ee.	*South Portland*	Σ N House
Brawn, Worthen Earle, Ch. Eng.	*Bath*	304 H. H. Hall
Bridgham, Donald Greenwood, Ag.	*Auburn*	301 Oak Hall
Bright, Elizabeth Mason, Bl.	*Bangor*	Mt. Vernon House
Bristol, Grace Bidwell, He.	*West Hartford, Conn.*	Mt. Vernon House
Brown, Clifford, Ce.	*Portland*	310 Oak Hall
Brown, Ruth Ellen, Eh.	*Brewer*	Mt. Vernon House
Callahan, Raymond Murray, Ag.	*Sabattus*	Θ X House
Carlisle, Percy James, Ag.	*Stillwater*	Stillwater
Carter, Ray Milo, Ch.	*West Hawley, Mass.*	Spearen's Inn
Chapin, Francis Deering, Me.	*Saco*	Λ X Λ House
Chaplin, Leola Bowie, Eh.	*Cornish*	Balentine Hall
Cheney, Samuel Cox, Ce.	*Perham*	Σ X House
Clapp, Elwood Irvin, Ch. Eng.	*Brewer*	Brewer
Clark, Donald Simonton, Ee.	*Belfast*	Β Θ Π House
Clark, Wallace Leon, Ch. Eng.	*West Sullivan*	Φ K Σ House
Cobb, Philip Hacker, Bl.	*Denmark*	110 H. H. Hall
Cobb, Roland Hacker, Bl.	*Denmark*	110 H. H. Hall
Cobb, Sumner Chase, Ms.	*Perham*	Σ X House
Collins, Parkman Abbott, Bl.	*Readfield Depot*	Θ X House
Coombs, Ralph Davis, Ch.	*Medford, Mass.*	201 H. H. Hall
Copp, Lincoln Brackett, Es.	*Cornish*	210 H. H. Hall
Cram, Abram Cousins, Ee.	*Limerick*	102 H. H. Hall

Creighton, George Plummer, Ch. Eng.	*Thomaston*	Φ Γ Δ House
Crossland, Charles Edward, Ag.	*Lawrence, Mass.*	Campus
Crowell, Fred Donald, Es.	*Bangor*	Β Θ Π House
Curran, Lawrence Edward, Ch. Eng	*Great Works*	Φ Γ Δ House
Danforth, Earle Herrick, Ag.	*Bangor*	Φ Η Κ House
Danforth, Helen Lois, He.	*Bangor*	Mt. Vernon House
Davis, Kenneth Wayne, Es.	*Monson*	112 H. H. Hall
Dempsey, Edmund James, Ch.	*Mattapan, Mass.*	Σ Χ House
Dole, George Elmer, Bl.	*Haverhill, Mass.*	403 H. H. Hall
Dow, Mildred May, Eh.	*So. Portland*	Mt. Vernon House
Dunn, Arthur Wilfred, Ag.	*Yarmouthville*	Θ Χ House
Dutton, Philip Smith, Bl.	*Steuben*	Α Τ Ω House
Eldridge, Charles Wilson, Es.	*Foxcroft*	Σ Α Ε House
Ellis, Alfreda, He.	*Belfast*	Balentine Hall
Emerson, Percy Daniel, Ce.	*Biddeford*	Α Τ Ω House
Emery, Earle, Leslie, Ag.	*Salisbury Cove*	Σ Ν House
Emery, Marion, He.	*Limerick*	Campus
Fides, Avery Meader, Ag.	*Orr's Island*	Φ Η Κ House
Foster, Arthur Leo Livington, Ch. Eng.	*Ellsworth Falls*	302 Oak Hall
Fox, George Edward, Ch. Eng.	*Glens Falls, N. Y.*	Α Τ Ω House
Fraser, Ralph Ervine, Me.	*Presque Isle*	Φ Η Κ House
Freese, Langdon Jackson, Ee.	*Bangor*	Κ Σ House
French, Frank Alexander, Es.	*Wappinger's Falls, N. Y.*	Θ Χ House
Gerry, Laurel Osgood, Gm.	*Brownville*	Α Τ Ω House
Gilpatrick, Verner Elisha, Eh.	*Orono*	Bennoch Street
Godfrey, Noel Davis, Es.	*Lubec*	Park Street
Gonyer, Frances Louise, Rm.	*Littleton, N. H.*	24 Bennoch Street
Gould, Paul Lawrence, Arts	*Portland*	Bennoch Street
Gray, Albert Leroy, Ce.	*Westbrook*	Φ Γ Δ House
Greeley, Helen Margaretta, Ch.	*Bar Harbor*	Balentine Hall
Green, Daniel Emerson, Ag.	*Brewer*	310 H. H. Hall
Greenwood, Russell Sanford, Ag.	*Presque Isle*	Φ Η Κ House
Guiou, Elty Chester, Ce.	*Orono*	Main Street
Hanly, Edward Kavanaugh, Fy.	*Thomaston*	Park Street
Hansen, George Edward, Fy.	*Worcester, Mass.*	103 Oak Hall
Harding, Raymond Hawthorne, Ch. Eng.	*Kennebunk*	Σ Α Ε House
Harmon, Frank Lorenzo, Ee.	*Corinna*	Φ Η Κ House

Harrison, Mary Violetta, Gm.	*Freeport*	Main Street
Haskell Weston Bradford, Ag.	*Auburn*	Β Θ Π House
Hayden, Alfred Dorr, Ee.	*Key West, Fla.*	Λ Χ Α House
Herrick, Carlton Sewall, Me.	*South Brewer*	Κ Σ House
Higgins, Royal Grant, Ce.	*Bar Harbor*	Σ Ν House
Hill, Mark Langdon, Ch. Eng.	*Bath*	Β Θ Π House
Hiller, Howard Bryant, Ag.	*Marion, Mass.*	Σ Α Ε House
Hilton, Cecil Max, Ce.	*Greenville*	Φ Κ Σ House
Hopkins, Bryant Lealand, Ce.	*North Haven*	401 H. H. Hall
Howard, Flora Adelaide, He.	*Bangor*	82 Montgomery Street, Bangor
Hunt, Lilian Crosby, Eh.	*Old Town*	Old Town
Hurd, Everett St. Claire, Ee.	*Pittsfield*	Φ Κ Σ House
Hutchinson, Daniel Clair, Ag.	*Dover*	Park Street
Ingraham, Edith Louise, Gm.	*Bangor*	78 Grant Street, Bangor
Jacobs, Maurice, Bl.	*Methuen, Mass.*	203 Oak Hall
Jenkins, Howard Lawrence, Ag.	*Methuen, Mass.*	Σ Α Ε House
Johnson, Carl Strong, Ag.	*Easthampton, Mass.*	Β Θ Π House
Jones, Frederic Paul, Ee.	*Biddeford*	301 H. H. Hall
Jones, Walter Converse, Es.	*Portland*	Σ Ν House
Kilburn, George Washington, Ms.	*Fort Fairfield*	Σ Χ House
King, Harold Louis, Ch.	*Orono*	Θ Χ House
LaCrosse, Waldo Joseph, Ag.	*South Brewer*	South Brewer
Lane, Hazel, He.	*Lewiston*	Balentine Hall
Lavorgna, Albert, Ce.	*Canton*	409 Oak Hall
Libby, Philip Nason, Fy.	*Gray*	304 H. H. Hall
Libby, Seth Emerson, Ch.	*Portland*	Φ Η Κ House
Littlefield, Waldemar Bunker, Me.	*Brewer*	Φ Κ Σ House
Lougee, Frances Marie, Gm.	*Winterport*	Balentine Hall
McCabe, Francis Thomas, Ee.	*Worcester, Mass.*	Δ Τ Δ House
McCabe, George Curtin, Ee.	*Kennebunkport*	102 H. H. Hall
McCobb, Herbert Hodges, Ag.	*Center Lincolnville*	Α Τ Ω House
McCusker, Joseph Aloysius, Bl.	*Braintree, Mass.*	Θ Χ House
McKown, Richard Edward, Me.	*Southport*	Σ Χ House
Mank, Nelson Fountain, Me.	*Portland*	Σ Ν House
Marble, Gerald Coker, Me.	*Skowhegan*	Κ Σ House
March, Ruth Evelyn, He.	*Easton*	Balentine Hall
Martini, Mary Lillian, He.	*Orono*	Bennoch Street
Mason, Walter Lee, Ed.	*Orono*	Mill Street
Mathews, Wilbur Leonard, Ee.	*Berwick*	Α Τ Ω House
Maxfield, Horatio Winfred, Ce.	*Portland*	Φ Κ Σ House

Mercier, Dorothy, Lt.	*Princeton*	Balentine Hall
Merrill, Katharine Buffum, Eh.	*Orono*	Main Street
Moloney Helen Carew, Eh.	*Orono*	North Main Street
Moulton, Parker Nash, Bl.	*Bath*	Σ Λ E House
Mower, Clyde Fletcher, Me.	*Dexter*	Park Street
Mower, Leland Monroe, Ce.	*Auburn*	202 Oak Hall
Mullen, Charles Emerson, Ch. Eng.	*Bangor*	Φ Γ Δ House
Myrick, Leroy Henry, Ce.	*East Machias*	Δ T Δ House
Nash, William Edmund, Ce.	*Concord, N. H.*	K Σ House
Needham, Stanley Francis, Es.	*Old Town*	Old Town
Nowell, Foster, Ce.	*Reading, Mass*	Δ T Δ House
O'Donoghue, William Florence, Fy.	*Lowell, Mass.*	Park Street
Packard, Horace Candage, Ch.	*Hartland*	Orono
Page, Schuyler Colfax, Ee.	*Caribou*	Φ H K House
Park, Irwin James, Ce.	*Orono*	Θ X House
Parshley, David Hobbs, Ch.	*South Berwick*	A T Ω House
Partridge, Clara Estelle, He.	*Pemaquid Beach*	Balentine Hall
Pemberton, Harold Sawyer, Ce.	*Groveland, Mass.*	Λ X A House
Pendleton, Raymond Ambrose, Ms.	*Brewer*	Φ K Σ House
Penney, Charles Clifton, Ag.	*Lewiston*	Θ X House
Perry, Mildred Geneva, Eh.	*Orono*	Orono
Peterson, Henry Andrew, Bl.	*Portland*	110 H. H. Hall
Phelps, Elizabeth Cornelia, Gm.	*Foxboro, Mass.*	Balentine Hall
Phelps, Ferdinand Zanoni, Ch.	*Foxboro, Mass.*	Σ X House
Phillips, Stanley Gilkey, Ce.	*Westbrook*	Φ Γ Δ House
Pierce, Ralph Bartlett, Ch.	*Beverly, Mass.*	Σ X House
Pitman, Linwood True, Me.	*Fairfield*	Θ X House
Post, Lawrence Leicester, Ce.	*Alfred*	310 H. H. Hall
Preble, Leslie Edward, Ch. Eng.	*Saco*	Σ N House
Preti, Frank Peter, Es.	*Portland*	Φ H K House
Reed, Harold Langdon, Ch.	*Lewiston*	Θ X House
Reed, Stanley Lewis, Me.	*Methuen, Mass.*	312 Oak Hall
Remick, Edward Carleton, Ee.	*Springvale*	K Σ House
Reynolds, William Eugene, Ag.	*Northeast Harbor*	Δ T Δ House
Ricker, Ruth Merrill, He.	*Lisbon*	Colburn House
Ridley, James Stevens, Ch. Eng.	*Brunswick*	Θ X House
Roberts, George Harley, Ch.	*Brownville*	B Θ Π House
Robie, Mary Frederica, He.	*Gorham*	Mt. Vernon House
Robinson, Albert Lealand, Ag.	*South Windham*	Θ X House
Robinson, Carl Elmo, Ag.	*Bangor*	209 H. H. Hall
Robinson, George Campbell, Me.	*Westbrook*	Δ T Δ House

Rodden, William Henry, Me.	*Reading, Mass.*	Δ T Δ House
Rodick, David Owen, Es.	*Bar Harbor*	Σ X House
Rowley, Levi Thaddeus, Me.	*Hartford, Conn.*	Orono
Russell, Edward Sebastian, Ag.	*Vinalhaven*	Σ X House
Russell, Merle Alton, Bl.	*Norway*	Φ K Σ House
Savage, Doris, Gm.	*Bangor*	Balentine Hall
Sawyer, Ralph Erle, Ee.	*Buxton*	Σ N House
Schneider, Anthony Percy, Jr., Ag.	*Jersey City, N. J.*	Φ Γ Δ House
Scribner, John Leslie, Ag.	*Plattsburg, N. Y.*	Orono
Shea, Thomas Francis, Ce.	*Bangor*	154 Parkview Avenue, Bangor
Sherman, Fuller Gustavus, Ch.	*Randolph*	Δ T Δ House
Silva, Richard Leslie, Es.	*Provincetown, Mass.*	Σ N House
Simpson, William Andrew, Ag.	*Marlboro, Mass.*	Σ N House
Smiley, James Harold, Ce.	*Bradford, Mass.*	Φ K Σ House
Smith, Clarence Llewellyn, Me.	*Vinalhaven*	207 H. H. Hall
Smith, Marshall Odell, Ch. Eng.	*Yarmouth*	Θ X House
Stackpole, Miner Reginald, Ce.	*Sanford*	Σ A E House
Stephens, Frank Owen, Eh.	*Auburn*	B Θ Π House
Stephenson, Charles Lindsley, Ag.	*Orono*	Φ H K House
Stevens, Ray Randolph, Ag.	*Ashland*	Φ H K House
Steward, Raymond Benson, Ag.	*Portland*	310 Oak Hall
Stoddard, Stanley Waldron, Ee.	*Bingham*	A T Ω House
Stœhr, Rudolph, Ag.	*Sabattus*	Park Street
Stoughton, Richard, Ag.	*Montague, Mass.*	Λ X A House
Sturtevant, Jessie May, Eh.	*Milo*	Bennoch Street
Swanton, Carl Bartlett, Ce.	*Milbridge*	25 Mill Street
Sweet, George Francis, Ce.	*Williamstown, Mass.*	Φ Γ Δ House
Tabachnick, George Enoch, Ee.	*Portland*	203 H. H. Hall
Thayer, Frank Laurence, Es.	*Waterville*	Θ X House
Thomas, Roy Frank, Ag.	*Monson*	Spearin's Inn
Travers, Robert James, Ee.	*Bangor*	68 Jefferson Street, Bangor
Vickery, Earle Wendell, Ag.	*Bangor*	Σ X House
Wadlin, George Knowlton, Ee.	*East Northport*	Λ X A House
Wahlenberg, William Gustavus, Fy.	*Suffield, Conn.*	211 H. H. Hall
Wardwell, Simon Murray, Ch. Eng.	*Auburn*	303 Oak Hall
Waterhouse, Russell Vale, Ag.	*Kennebunk*	Σ A E House
Watkins, Herbert Everett, Ch. Eng.	*Portland*	Δ T Δ House
Waugh, Harvey Cyrus, Me.	*Levant*	Σ N House
Welch, Donald Stuart, Ag.	*Norway*	Φ H K House

Wentzel, Roy Alva, Ce.	*Livermore Falls*	Σ A E House
Weymouth, Currier, Bl.	*Kingfield*	Δ T Δ House
Wilson, Rolla Tenney, Ee.	*Bangor* 27 Spruce	Street, Bangor
Wood, Frances Andrews, Rm.	*Bar Harbor*	Balentine Hall
Wood, Lawrence Blanchard, Ag.	*Kingfield*	410 H. H. Hall
Wood, Margaret Allen, Gm.	*Bar Harbor*	Balentine Hall
Zabe, Ferris Joseph, Ee.	*Bangor* 17 Newbury	Street, Bangor

FRESHMEN

Abbott, Voyle Eben, Ch. Eng.	*Albion*	A T Ω House
Adams, Carl Edwin, Ch.	*Franklin, Mass.*	106 Oak Hall
Adams, George Joseph, Arts	*Orono*	35 Mill Street
Aikins, Walter Bowen, Ag.	*South Windham*	Campus
Albee, Clarence Gray, Ce.	*Machias*	Φ H K House
Allen, William Henry, Arts	*Brownville Junction*	B Θ Π House
Alley, Frank Oren, Jr., Ag.	*Bar Harbor*	Σ X House
Andrews, Harold Taylor, Ch. Eng.	*Portland*	B Θ Π House
Annis, Howard Leroy, Ph.	*Lincoln Center*	A T Ω House
Atherton, Raymon Neale, Ag.	*Augusta*	202 H. H. Hall
Ballantyne, Aubrey Elverton, Ch.	*Ware, Mass.*	Park Street
Barker, Malcolm Everett, Fy.	*Gardiner*	309 H. H. Hall
Barnard, Adriel Fales, Me.	*Bucksport*	Park Street
Barrett, Willett Clark, Ce.	*Newport, R. I.*	Φ Γ Δ House
Bayard, Pauline, Arts	*Orono*	Main Street
Bayer, Harry Lewis, Ce.	*Bangor*	401 H. H. Hall
Beck, Joseph Thomas, Ch. Eng.	*Augusta*	Δ T Δ House
Bernier, Joseph Lovejoy, Ag.	*Springvale*	Orono
Beverage, Stanley Fremont, Ch.	*North Haven*	111 H. H. Hall
Billings, Jesse Winfield, Ag.	*Boston, Mass.*	Mill Street
Bisbee, Frederick Carlton, Ee.	*Berlin, N. H.*	308 Oak Hall
Blackman, Marie Prince, He.	*Peak Island*	Mt. Vernon House
Blackwood, Harold Frank, Ce.	*West Pembroke*	Main Street
Blaisdell, Harvard Wilbur, Arts	*North Sullivan*	Orono
Blake, Philip Warren, Arts	*Marlboro, Mass.*	403 Oak Hall
Boomer, Vurle Lee, Ch. Eng.	*Lubec*	Park Street
Boothby, Wallace Johnson, Arts	*Bangor* 63 Dillingham	Street, Bangor
Borjesson, Thomas Whitmore, Ag.	*Richmond*	105 Oak Hall
Boynton, Percival Reed, Ee.	*Roxbury, Mass.*	Mill Street
Brackett, Robert Emerson, Ce.	*Limington*	Mill Street
Bransfield, William Henry, Ee.	*Willimantic, Conn.*	Penobscot Street

Brasier, Everett Hovey, Ch.	*Guilford*	301 H. H. Hall
Brittain, Thomas Waldo, Ch.	*Island Falls*	104 H. H. Hall
Brooks, Winfield Alpheus, Ce.	*South Paris*	209 H. H. Hall
Brown, Earl Robert, Arts	*Bangor*	446 Hammond Street, Bangor
Brown, Ernest Sanford, Ch. Eng.	*Kineo*	303 H. H. Hall
Brügge, Carl Frederick, Me.	*Gorham*	Κ Σ House
Burke, John Andrew Aloysius, Me	*Portland*	Α Τ Ω House
Cahill, Thomas Henry, Jr., Ag.	*Salem, Mass.*	Θ Χ House
Caine, Mae Frances, Arts	*Brewer*	Brewer
Caldwell, Harold Benjamin, Ee.	*Madison*	111 Oak Hall
Cameron, George Clifton, Me.	*Fryeburg*	403 H. H. Hall
Campbell, Edwin Murray, Arts	*Portsmouth, N. H.*	Θ Χ House
Cannon, Gertrude Frances, Arts	*Brewer*	Brewer
Carde, Albert Martin, Arts	*Bowdoinham*	212 H. H. Hall
Carlson, Thurston Daniel, Ee.	*Hopedale, Mass.*	Σ Α Ε House
Carlton, George Melvin, Ee.	*Woolwich*	302 H. H. Hall
Carr, Russell Alton, Ch. Eng.	*Sangerville*	303 H. H. Hall
Carter, George Milton, Ee.	*Washburn*	411 H. H. Hall
Carter, John William, Ag.	*Mt. Desert*	Pleasant Street
Casey, John Thomas, Jr., Arts	*Ware, Mass.*	Park Street
Chadbourne, Preston Berlin, Ag.	*Harmony*	Grove Street
Chamberlain, Newell Burnap, Arts	*Cambridge, Mass.*	Σ Ν House
Chapman, Russell Comstock, Ce.	*Hartford, Conn.*	Φ Κ Σ House
Cheney, George Henry, Ch.	*Randolph*	409 H. H. Hall
Cobb, Herbert Gray, Ag.	*Woodfords*	Φ Κ Σ House
Cohoon, Raymond, Me.	*Bucksport*	Σ Α Ε House
Cole, Raymond Fuller, Arts	*Brewer*	Δ Τ Δ House
Conley, William James, Ch. Eng.	*Pembroke*	Main Street
Coolbroth, Ernest Leon, Ce.	*Woodfords*	Φ Υ Δ House
Crawshaw, Thomas Hill, Fy.	*Lewiston*	306 Oak Hall
Creamer, Walter Joseph, Jr., Ch.	*Bangor*	24 George Street, Bangor
Crockett, Mark Vernon, Arts	*Gorham, N. H.*	Θ Χ House
Crosby, Harold Dunmore, Ag.	*Wollaston, Mass.*	Mill Street
Culhane, Gerald Joseph, Arts	*Boston, Mass.*	Main Street
Cushing, Benjamin Hilton, Fy.	*Long Island*	Σ Χ House
Cutter, Hiram Edwin, Ag.	*East Jaffrey, N. H.*	Bennoch Street
Dahlgren, Sigfried Alexander, Ag.	*Camden*	Peters Street
Davis, Edward Harrington, Ch.	*Saugus, Mass.*	206 Oak Hall
Davis, Manley Webster, Ch.	*Guilford*	Φ Γ Δ House

Davis, Melvin Linwood, Ee.	*Sabattus*	311 H. H. Hall
DeBeck, Edith Eirena, Arts	*Franklin*	Balentine Hall
Deering, Ralph Ozro, Ag.	*Bridgton*	Φ K Σ House
Dennett, Winburn Albert, Ee.	*Hopedale, Mass.*	Σ A E House
Derby, Pauline, Arts	*Bangor*	366 French Street, Bangor
Dodd, Clarence John, Ee.	*Mexico*	College Street
Doe, Harold Oliver, Ch.	*Bangor*	100 Highland Street, Bangor
Dolloff, Philip Warren, Ag.	*Standish*	312 H. H. Hall
Donegan, William Thomas, Ag.	*Cape Elizabeth*	B Θ Π House
Dow, Kathryn May, He.	*Searsport*	Mt. Vernon House
Drisko, Clarence Holmes, Me.	*Columbia Falls*	Park Street
Dudley, Oliver Charles, Ag.	*West Farmington*	Λ X A House
Dugan, Frances Joan, Arts	*Bangor*	54 Sidney Street, Bangor
Dunham, Stephen Merle, Me.	*Auburn*	303 Oak Hall
Dunn, Perley Bernard, Ag.	*Buckfield*	403 H. H. Hall
Dunning, Robert Blaisdell, Ee.	*Bangor*	Φ Γ Δ House
Edgerly, Lloyd Irving, Ch. Eng.	*Swampscott, Mass.*	K Σ House
Ellsworth, Harry Arthur, Ag.	*Farmington*	110 Oak Hall
Emerson, Raymond LaForest, Me.	*Island Falls*	104 H. H. Hall
Emmons, Everett Ellsworth, Ee.	*Portland*	112 Oak Hall
Estes, Roland Francis, Arts	*Bangor*	Φ Γ Δ House
Evans, Weston Sumner, Ce.	*South Windham*	304 H. H. Hall
Farmer, Eva Marguerite, He.	*Charleston*	Balentine Hall
Farnsworth, Everett Dean, Eng.	*Cherryfield*	Orono
Farwell, Harris Frederick, Ce.	*Dorchester, Mass.*	Φ Γ Δ House
Ferguson, Frank Currier, Arts	*New York City*	K Σ House
Fernald, Abraham Chadwick, Arts	*Mt. Desert*	Δ T Δ House
Flewelling, Leslie Covert, Ce.	*Needham, Mass.*	111 H. H. Hall
Folsom, Dorothy Louise, Arts	*Norridgewock*	Balentine Hall
Foss, Charles Lea, Me.	*Woodfords*	Θ X House
Foster, Philip Eugene, Ee.	*Bar Harbor*	Pine Street
Foyer, James Clayton, Arts	*Veazie*	R. F. D. No. 7, Bangor
Frawley, Marie Alice, Arts	*Bangor*	Balentine Hall
French, Gardner Marble, Ce.	*Mansfield, Mass.*	212 H. H. Hall
Friedman, Lee Manheim, Arts	*Houlton*	Grove Street
Frost, Ermont Getchell, Me.	*Springvale*	K Σ House
Gammell, Lewis Waldo, Ch. Eng.	*Attleboro, Mass.*	North Main Street
Gardner, Leigh Philbrook, Ag.	*Dennysville*	401 H. H. Hall
Garrison, George Harrison, Ee.	*Portland*	Φ Γ Δ House

Gellerson, Vera Elvira, He.	*Houlton*	Coburn House
Gibbs, Frederick Donald, Eng.	*So. Portland*	Σ N House
Gibbs, Grace Mabel, He.	*East Orland*	Balentine Hall
Giberson, Claude Trafton, Me.	*Groveton, N. H.*	310 H. H. Hall
Given, Clair William, Me.	*Island Falls*	104 H. H. Hall
Goldberg, Abraham Frederick, Ch. Eng.	*Bangor*	67 Pine Street, Bangor
Goodwin, Eugene Wiley, Me.	*Rockport*	301 H. H. Hall
Gorham, William Joseph, Arts	*Wilkes Barre, Pa.*	Κ Σ House
Gray, James Harford, Ag.	*Lubec*	Β Θ Π House
Greeley, Julian Francis, Ag.	*Portland*	Β Θ Π House
Greene, Roland Lawrence, Ag.	*South Brewer*	Δ Τ Δ House
Gribbin, Benjamin Herbert, Ce.	*Portland*	212 H. H. Hall
Gross, Maurice Clinton, Arts	*Deer Isle*	Σ Α Ε House
Guinan, William Francis, Ce.	*Northampton, Mass.*	310 H. H. Hall
Hagerty, Jean Mason, Arts	*Malden, Wash.*	203 H. H. Hall
Hague, Harold James, Ee.	*Old Orchard*	Main Street
Hahn, Edward Everett, Jr., Me.	*Boothbay Harbor*	Φ Η Κ House
Haines, Frederick Bates, Ce.	*Portland*	Β Θ Π House
Hall, Sumner, Augustus, Ag.	*Gloucester, Mass.*	Δ Τ Δ House
Ham, Wallace Reed, Ee.	*Bath*	302 H. H. Hall
Hamilton, Guy Bradford, An.	*Portland*	Λ Χ Α House
Hanson, Ernest Freeman, Arts	*Gorham*	Φ Γ Δ House
Harmon, Artemas Henry, Ch. Eng.	*Portland*	Σ Χ House
Harper, Herbert Leon, Arts	*Calais*	53 Mill Street
Harper, William Chesley, Ch.	*Gardiner*	407 H. H. Hall
Haskell, Ernest Edward, Arts	*North Sullivan*	2 Bennoch Street
Hatch, Ellis Johnson, Me.	*Dark Harbor*	Park Street
Hathaway, Lester Walton, Ce.	*Bryant Pond*	102 Main Street
Hawkes, James Robert, Eng.	*South Portland*	Campus
Hawthorne, Robert Henry, Ce.	*Brownville*	Main Street
Hayes, Fred Lendall, Ag.	*Foxcroft*	Park Street
Head, Francis, Ce.	*Bangor*	312 H. H. Hall
Herlihy, Edward Leo, Arts	*Bangor*	174 York Street, Bangor
Hewett, Chester Arthur, Fy.	*Lexington*	106 Oak Hall
Hill, Benjamin Franklin, Ee.	*Somersworth, N. H.*	91 Main Street
Holmes, Everard Reed, Ee.	*Sanford*	38 Pine Street
Hooper, Henry Stinson, Ch. Eng.	*Bucksport*	Pine Street
Howard, Ruby May, He.	*Holden*	College Street
Hurd, Robert Gerry, Ch.	*Bangor*	Φ Η Κ House

Huskins, Blanche Eloise, He.	*Auburn*	Balentine Hall
Hutchinson, George Stanley, Ee.	*Cape Neddick*	Mill Street
Hutchins, George Stanley, Ee.	*Fryeburg*	Mt. Vernon House
Hutton, Robert Grandvill, Ag.	*Bowdoinham*	Θ X House
Hysom, Roscoe Hartwell, Ee.	*Cambridge, Mass.*	Pleasant Street
Jackson, Kenneth Flanders, Ch. Eng.	*Sangerville*	303 H. H. Hall
James, Frank Stanley, Ch.	*Lynn, Mass.*	211 H. H. Hall
Johnson, Lorin Baker, Fy.	*Fitchburg, Mass.*	Park Street
Jones, Charles Elmer, Arts	*Bangor*	250 State Street, Bangor
Jones, Harold Norton, Ch.	*Peabody, Mass.*	Σ N House
Jordan, Arlo Clifton, Ch.	*Portland*	312 Oak Hall
Jortberg, Charles Augustus, Ch. Eng.	*Portland*	402 H. H. Hall
Kaulfuss, Arthur Frederick, Arts	*Orono*	Main Street
Keep, John Marcus, Arts	*Conway, N. H.*	Λ X Λ House
Kennett, Russell Blaisdell, Me.	*Madison, N. H.*	16 Bennoch Street
Kenney, Fred Lee, Ag.	*Brooks*	109 H. H. Hall
Kerr, Frank Stanley, Arts	*Boston, Mass.*	Σ N House
Kimball, Guy Harold, Ch. Eng.	*Waterboro*	Park Street
Larrabee, Callie Hamm, Arts	*Frankfort*	40 Main Street
Lawrence, Doris Winnifred, Arts	*Bangor*	29 George Street, Bangor
Lawrence, Fila Lavina, He.	*North Lubec*	Sampson House
Legal, Chapin, Ag.	*Calais*	Σ N House
Leighton, Chester Frank, Ee.	*Strong*	Orono
Leighton, Ralph Melvin, Ch. Eng.	*Bar Harbor*	College Street
Lewis, Roscoe Samuel, Fy.	*Auburn*	306 Oak Hall
Libby, Alton Bert, Ee.	*Oakland*	Λ T Ω House
Libby, Bernard Augustus, Ee.	*Limerick*	Orono
Libby, Donald Maxwell, Ee.	*Limerick*	Park Street
Libby, Ellen Dorothea, He.	*Albion*	Sampson House
Libby, Everett Eugene Fales, Ee.	*Rockport*	202 H. H. Hall
Libby, Frank Dexter, Ch.	*Gardiner*	Δ T Δ House
Libby, Lewie Everett, Ee.	*Westbrook*	Σ X House
Libby, Lucien Taylor, Ch.	*Scarboro*	103 H. H. Hall
Lincoln, Donald Morton, Ce.	*Dennysville*	101 H. H. Hall
Littlefield, Marguerite, He.	*Orono*	Park Street
Littlefield, Robert Moses, Ce.	*Ogunquit*	409 Oak Hall
Lloyd, Katherine Marie, Arts	*South Brewer*	South Brewer
Locke, John Fernando, Ch. Eng.	*Augusta*	205 Oak Hall

Longley, George Stephen, Jr., Ch. Eng.	*Lewiston*	305 H. H. Hall
Lord, Columbus Ellis, Ee.	*Guilford*	Park Street
Lown, Philip William, Ag.	*Chelsea, Mass.*	210 Oak Hill
Lyons, Martin Kenneth, Ag.	*Calais*	Mill Street
Mackay, Robert Alexander, Me.	*Dorchester, Mass.*	112 H. H. Hall
McCarthy, Raymond John, Arts	*Springfield, Mass.*	Bennoch Street
McGrath, Joseph William, Ch.	*Northampton, Mass.*	412 H. H. Hall
McGrath, John Merton, Arts	*Ridlonville*	Δ Τ Δ House
McIlroy, Cecil Dow, Arts	*Milo*	210 H. H. Hall
MacIntire, Donald Josiah, Ag.	*Biddeford*	House
McLean, Edward Archibald, Ce.	*Augusta*	205 Oak Hall
McNamara, Raymond, Me.	*Orono*	Mill Street
McPhee, Hugh Curtis, Ag.	*South Paris*	209 H. H. Hall
McRae, Lincoln Earl, Ce.	*Rockland*	Φ Γ Δ House
MacWilliams, Mona Beatrice	*Bangor*	Sampson House
Magee, John Henry, Arts	*Bangor*	25 Otis Street, Bangor
Mangan, Thomas Gerald, Ce.	*Pittsfield, Mass.*	112 H. H. Hall
Marsh, Raeburne Lyndon, Ag.	*Corinna*	101 H. H. Hall
Mason, Arthur Benjamin, Jr., Ee.	*Augusta*	401 Oak Hall
Matheson, Beatrice Louise, He.	*Bangor*	Mt. Vernon House
Mathieson, Donald Herbert, Ce.	*Rangeley*	College Street
May, Edwin Hyland, Ee.	*Hartford, Conn.*	Φ Κ Σ House
May, Marie Etta, Ag.	*Island Falls*	Bennoch Street
Mayo, Donald Atwood, Ee.	*Hampden Highlands*	Κ Σ House
Meaney, Cornelius Daniel, Ce.	*Marlboro, Mass.*	405 H. H. Hall
Merrill, Charles Neal, Ch.	*Bangor*	Φ Γ Δ House
Merrill, Marguerite Frances, He.	*Mechanic Falls*	Balentine Hall
Merriman, Lawrence Tilton, Ag.	*Harpswell Center*	402 Oak Hall
Merritt, Raymond Lowell, Fy.	*Brooks*	Φ Η Κ House
Mersereau, Vera Lurline, He.	*West Somerville, Mass.*	Colburn House
Mooney, Francis Edwin, Ag.	*Lubec*	Park Street
Moore, Madeline, Arts	*Orono*	Pine Street
Moore, Robert Colby, Pm.	*Bingham*	405 H. H. Hall
Morrell, Lester Howe, Arts	*Lewiston*	Φ Η Κ House
Morris, Paul Austin, Arts	*Old Town*	Old Town
Morse, James Lester, Ag.	*Bath*	302 H. H. Hall
Moul, Arthur Franklin, Fy.	*Hanover, Penna*	Φ Κ Σ House

Moulton, Simon Waldo, Arts	*Sebago Lake*	312 H. H. Hall
Mullen, Joseph Norman, Ee.	*Bangor*	Φ Γ Δ House
Murphy, Martin James, Jr., Arts	*Portland*	Δ T Ω House
Nealey, Everett Thornton, Jr., Arts	*Bangor*	178 Harlow Street, Bangor
Needelman, William Ralph, Ag.	*Portland*	Estabrook Hall
Newell, George Clifford, Ce.	*Turner*	304 H. H. Hall
Newman, Isaiah Leavitt, Me.	*East Wilton*	409 H. H. Hall
Newton, Max, Ch. Eng.	*Kents Hill*	204 H. H. Hall
Niles, Walter Leslie, Ce.	*Hallowell*	Δ T Δ House
Norton, Donald William, Ch. Eng.	*Kinkfield*	410 H. H. Hall
Norton, George Chapman, Ag.	*Strong*	Gilbert Street
O'Brion, Arthur Bartholomew, Pm.	*Portland*	112 H. H. Hall
O'Connell, John Michael, Jr., Arts	*Bangor*	12 Birch Street, Bangor
Orcutt, Halbert Haymond, Ce.	*Ashland*	Φ H K House
Osgood, Arthur Bradley, Ee.	*Bradford*	Stillwater
Parker, Erle St. John, Pm.	*Danforth*	Φ Γ Δ House
Parker, Stanley, Ag.	*South Leeds*	102 H. H. Hall
Partridge, Herbert George, Arts	*Searsport*	109 H. H. Hall
Pearson, Edgar Whitney, Me.	*Bangor*	182 Leighton Street, Bangor
Penley, Ferdinand Josiah, Ag.	*Lewiston*	306 H. H. Hall
Perkins, Carl Wakefield, Ch. Eng.	*Ogunquit*	104 Oak Hall
Perkins, Carlton Lincoln, Fy.	*Newburyport, Mass.*	102 Main Street
Perkins, Myles Standish, Me.	*Worcester, Mass.*	111 Oak Hall
Perry, Donald Burke, Ee.	*Hallowell*	Φ H K House
Perry, Earl Francis, Bl.	*Bangor*	Θ X House
Perry, John Howard, Ch.	*Lincoln*	Δ T Δ House
Philbrook, Everett Carlton, Ee.	*Gardiner*	309 H. H. Hall
Philips, Caldwell Sweet, Me.	*East Holden*	Σ A E House
Phillips, Ray Eugene, Arts	*Newport*	11 Pond Street
Pinkham, Jessie Marie, He.	*Farmington*	Balentine Hall
Potter, Don Theron, Eng.	*Brunswick*	Θ X House
Pottle, Guy Edgar, Ee.	*Gardiner*	402 H. H. Hall
Priest, Haller Varney, Ag.	*Derby*	Σ N House
Pugsley, Rodney, Ce.	*Cornish*	412 Oak Hall
Ramsay, John Parker, Arts	*Woodfords*	Φ K Σ House
Ramsdell, Hollis Leroy, Ag.	*West Lubec*	Park Street
Ramsdell, Percy Eugene, Ag.	*Jefferson*	Park Street
Reardon, Jeremiah Timothy, Ag.	*Concord, N. H.*	K Σ House
Redin, Lecland John, Ch. Eng.	*Woodfords*	Σ N House
Reed, Carrol Coffin, Ag.	*Hollis, N. H.*	305 H. H. Hall
Reed, Gladys Cage, Arts	*Bangor*	Balentine Hall

Rice, Charles Anthony, Arts	*Uxbridge, Mass.*	K Σ House
Rich, Robert, Ee.	*Berlin, N. H.*	308 Oak Hall
Richardson, Burt, Jr., Arts	*Los Angeles, Calif.*	B Θ Π House
Richardson, George Lovell, Ag.	*Needham, Mass.*	Park Street
Ring, Edgar Raymond, Arts	*Orono*	Summer Street
Riva, Robert Arthur, Ee.	*Berlin, N. H.*	91 Main Street
Roberts, George Edward Jr,. Ag.	*Weeks Mills*	Campus
Robie, Frederick, Ht.	*Gorham*	K Σ House
Rolfe, Weldon Henry, Eng.	*Presque Isle*	Φ H K House
Rose, Hester Miles, Arts	*Brooks*	Mt. Vernon House
Rosenbloom, Hiram, Ee.	*No. Conway, N. H.*	210 H. H. Hall
Ross, Fern Charlotte, He.	*Dexter*	Balentine Hall
Rowe, Harland Stimson, Arts	*Springvale*	B Θ Π House
Rudman, Maurice Aaron, Arts	*Portland*	159 Hancock Street, Bangor
Ruggles, Gould Bishop, Ee.	*Reading, Mass.*	406 H. H. Hall
Russell, Alfred Mason, Ce.	*Rangeley*	College Street
Russell, Doris Ethel, Arts	*Orono*	80 Main Street
Ryan, Stephen Joseph, Me.	*Ayer, Mass.*	Main Street
Sanderson, Philip Hadley, Arts	*Portsmouth, N. H.*	Λ X Λ House
Sawyer, Charles Augustine, Me.	*Portland*	Θ X House
Sawyer, Ethel Beatrice, Arts	*Portland*	Balentine Hall
Shaw, Albert Leland, Ch. Eng.	*Lewiston*	102 Oak Hall
Shaw, Reba Cleaves, He.	*Orono*	Park Street
Sheridan, Charles John, Ee.	*Skowhegan*	North Main Street
Sherman, Philip Hayden, Ch.	*Portland*	304 Oak Hall
Simms, Henry Swain, Ch. Eng.	*Gorham*	Φ Γ Δ House
Sisson, Willard Case, Ag.	*Hartford, Conn.*	410 H. H. Hall
Skelton, William Larrabee, Arts	*Lewiston*	Φ K Σ House
Small, Clive Ceylon, Ch. Eng.	*Farmington*	Φ K Σ House
Smith, Milan James, Arts	*Alton*	Old Town
Snow, Vergne Rockwood, Ag.	*Portland*	Λ T Ω House
Somers, Roy Merry, Ag.	*Portland*	Δ T Δ House
Spaulding, Earl Williams, Ag.	*Solon*	Φ H K House
Spaulding, Herbert Ansel, Ag.	*Buckfield*	208 Oak Hall
Speirs, James Everett, Arts	*Portland*	Δ T Δ House
Spellissy, Frank Thomas, Arts	*Marlboro, Mass.*	106 Oak Hall
Spratt, Aubury Johnson, Ee.	*Bar Harbor*	Σ X House
Springer, Clarence Barrows, Ee.	*Portland*	Σ N House
Stacy, Arthur Percy, Fy.	*Foxcroft*	Park Street

Stahl, Jerome Guttman, Es.	*Berlin, N. H.*	Θ X House
Stanley, Watson Frank, Arts	*Springvale*	B Θ Π House
Stanton, Augustus Emily Hazelton, Arts	*Great Neck, N. Y.*	Colburn House
Stanton, John Clifford, Ag.	*South Thomaston*	402 Oak Hall
Staples, Laurence Elwin, Ag.	*Shapleigh*	Gilbert Street
Steele, Lester Brown, Ag.	*Harrington*	Campus
Stinchfield, Helen Louise, Arts	*Danforth*	Balentine Hall
Stott, Gerald Ross, Ch. Eng.	*Sangerville*	303 H. H. Hall
Strout, Freeman Leigh, Ce.	*Bradford*	Stillwater
Stuart, Helen Loggie, Arts	*Bangor*	14 Davis Street, Bangor
Sturtevant, Walter Conrad, Ag.	*Milo*	210 H. H. Hall
Sullivan, George Wilmer, Ch. Eng.	*Veazie*	R. F. D. No. 7, Bangor
Suttie, Thomas Harold, Fy.	*Waterville*	307 Oak Hall
Swift, Harold Clayton, Ag.	*Auburn*	306 H. H. Hall
Tapley, Loring Morton, Ch. Eng.	*Hartford, Conn.*	410 H. H. Hall
Tenney, John Augustus, Jr., Ee.	*Houlton*	Bennoch Street
Thaanum, Joanna Mary, He.	*Winthrop*	Balentine Hall
Theriault, Dolore Frank, Ch. Eng.	*Millinocket*	203 H. H. Hall
Thomas, Fletcher Alton, Ag.	*Leeds Center*	102 H. H. Hall
Thomas, Kenneth Joshua, Ee.	*Calais*	Mill Street
Thompson, Seward Roy, Arts	*Standish*	312 H. H. Hall
Toothaker, Bernard Leroy, Arts	*Strong*	Orono
Toothaker, Clifton J., Ee.	*Strong*	38 Pine Street
Townsend, Harvard Clark, Ag.	*Newport*	101 H. H. Hall
Turner, Dwight Wilson, Ag.	*Buckfield*	208 Oak Hall
Turner, Ernest Julian, Ch. Eng.	*Brewer*	74 State St., Brewer
Turner, O'Dillion Charles, Arts	*Veazie*	R. F. D. No. 7, Bangor
Tyler, Elmer Robert, Ag.	*South Paris*	209 H. H. Hall
Vaughan, Natalie Alice, Arts	*Berlin, N. H.*	Mt. Vernon House
Vaughan, Sewall Dunbar, Eng.	*Warren*	202 H. H. Hall
Verrill, Philip Thompson, Ch. Eng.	*Cumberland Mills*	Σ N House
Vrooman, Lee, Ag.	*Greenville*	304 Oak Hall
Watson, Harry Dexter, Me.	*West Baldwin*	412 Oak Hall
Webster, Fred Lot, Ag.	*West Farmington*	110 Oak Hall
Webster, Stephen Tracy, Ch. Eng.	*Augusta*	B Θ Π House
Weeks, Donald Ross, Ch. Eng.	*Rockland*	Park Street
Wells, Richard Rundlette, Arts	*So. Bristol*	206 Oak Hall
Wentworth, Mary Crosby, He.	*Pittsfield*	Mt. Vernon House
Wentworth, Ralph Carlton, Ag.	*Denmark*	110 H. H. Hall
Wescott, Merle William, Ce.	*Rumford*	Σ A E House

Whitcomb, Morton Church, Ch. Eng.	*Ellsworth*	Σ X House
White, Harry Lincoln, Arts	*Belfast*	K Σ House
Williams, Randall Vaughan, Ag.	*Lisbon Falls*	204 Oak Hall
Wilson, Francis Edward, Me.	*Alfred*	Α Τ Ω House
Winter, Clifford Maurice, Ee.	*Kingfield*	Δ Τ Δ House
Woodhead, Clarence, Ag.	*Springvale*	K Σ House
Worcester, Frank Clark, Arts	*Harrington*	Mill Street
Wunderlick, Albert Whittier, Arts	*Arlington, Mass.*	Σ X House
York, Clayton Elmer, Ag.	*Claremont, N. H.*	Α Τ Ω House

SPECIALS

Bartlett, Carroll Arthur, Ph.	*Norway*	207 Oak Hall
Bell, George Tolar Whitman, Es.	*Newtonville, Mass.*	Φ Γ Δ House
Bisbee, Francis Wilbert, Ag.	*East Sumner*	Myrtle Street
Blanchard, Everard Eells, Arts	*Buenos Aires, Argentina, S. A.*	Forest Avenue
Boothby, Everett Osgood, Me.	*Gorham*	K Σ House
Boothby, Ralph Hamilton, Ce.	*Portland*	Σ X House
Brackett, Altie Franklin, Ee.	*Berwick*	Α Τ Ω House
Brooks, Samuel Stevens, Ed.	*Orono*	Pleasant Street
Carter, Lauriston Folger, Ag.	*Braintree, Mass.*	Park Street
Colcord, John Harold, Ag.	*Province Lake, N. H.*	404 H. H. Hall
Crosby, Carle Byron, Ee.	*Bangor*	Σ Α Ε House
Dodge, Richard Boulsby, Ag.	*Machias*	Greenhouse
Erswell, Charles Snerman, Ch.	*Brunswick*	Θ X House
Fletcher, Robert Kemble, Bl.	*Waltham, Mass.*	North Main Street
Graves, Frederick Taylor, Ht.	*Bridgeport, Conn.*	Σ Α Ε House
Hamlin, Truman Leigh, Ms.	*Stillwater*	Stillwater
Hassler, John William, Ag.	*Perth Amboy, N. J.*	107 Oak Hall
Hexter, Lewis Franklin, Eh.	*Bangor*	339 Union Street, Bangor
Hitchings, Samuel Lord, Ht.	*Orono*	Summer Street
Hood, Walter Joseph, Arts	*223a Congress Street, Portland*	Campus
Leighton, Arthur Whiting, Ag.	*Abington, Mass.*	University Inn
Lemont, Herbert Randall, Fy.	*Bath*	302 H. H. Hall
Libby, Herschel Scott, Pd.	*Berry Mills*	Myrtle Street
Maddocks, Carlton Whaton, Pd.	*Nicolin*	Orono
Merrill, Philip Knight, Fy.	*Woodfords*	Δ Τ Δ House

Morse, Earle Howard, Ch.	*Auburn*	Fernald Hall
Moulton, George Albert, Ce.	*East Brownfield*	204 H. H. Hall
Newdick, Erlon Lincoln, Ag.	*Sanford*	K Σ House
Rich, William Raymond, Ch.	*Gorham*	Δ T Δ House
Richardson, Alton Wellard, Ph.	*Bethel*	Θ X House
Sargent, Mary Elizabeth, Eh.	*Alton*	Old Town
Savage, Frank, Jr., Ee.	*Fairfield*	K Σ House
Smith, Royal Howard Gould, Ee.	*Gorham*	Σ X House
Southard, Lawrence, Ch.	*Brookline, Mass.*	Main Street
Startz, August William, Me.	*Wrentham, Mass.*	Θ X House
Williams, Gordon Rhys, Ph.	*Houlton*	Σ N House

THE COLLEGE OF LAW

SENIORS

Ashworth, George Robert Bowdoin College	*Waldoboro*	22 Sanford Street
Frizzell, Jay Hobart	*Groveton, N. H.*	12 Autumn Street
Frost, Clark Bradley	*Gorham, N. H.*	10 Cedar Street
Hoar, Ellen Morancy Mary Member of the Vermont State Bar	*Barre, Vt.*	24 Ohio Street
King, Robert Parsons, B. A. Bowdoin College, 1912; Harvard Law School	*Ellsworth*	59 Cedar Street
Mathews, Walter Ellwyn, B. A. Bates College, 1911	*St. Albans*	316 Hammond Street
Moody, Howard Clifton	*North Monmouth*	47 Summer Street
O'Leary, Cornelius Joseph Member of the Maine State Bar	*Bangor*	96 First Street
Tirrell, Frank Adams, Jr.	*Quincy, Mass.*	10 Cedar Street
Torrey, Merrill Edson	*Easthampton, Mass.*	173 Ohio Street
Weaver, Ernest Linwood	*Ashland*	22 Sanford Street
Welch, Herbert John	*Portland*	59 Cedar Street
Whitney, Clarence Alden	*Portland*	Sigma Chi House, Orono
Wing, Earl Lytton, B. A. Bowdoin College, 1910	*Kingfield*	Y. M. C. A.
Woolson, Raymond Travena	*Lisbon, N. H.*	47 Summer Street

JUNIORS

Bieler, Alexander Bert	*Bangor*	150 York Street
Burkett, Franz Upham, B. A. Bowdoin College, 1911	*Union*	62 Court Street
Caswell, George Riley	*Weeks Mills*	Y. M. C. A.

Crahmer, Harris Samson	*Bangor*	60 Locust Street
Crommett, Earle Erweed	*Ridlonville*	173 Ohio Street
Derrah, Floyd Mason	*Portland*	84 Cedar Street
Dubee, John Raymond	*Haverhill, Mass.*	161 Hammond Street
Gallagher, James Augustine	*Bangor*	34 Elm Street
Garakian, John Abraham, B. A.	*Constantinople, Turkey*	97 Third Street
Robert College, 1909		
Gray, Granville Chase	*Brewer*	56 Wilson Street
Harvey, Joseph Edmond	*Saco*	10 Cedar Street
Moren, Miller Bernard	*Lowville, N. Y.*	62 Court Street
Purdue University		
O'Leary, Charles John	*Bangor*	53 East Summer Street
Peterson, Harry Leland	*Danielson, Conn.*	5 Ohio Street
Quine, James Patrick	*Bangor*	184 Forest Avenue
Reed, Harold LeRoy	*Northeast Harbor*	10 Cedar Street
Rogers, William Nathaniel	*Sanbornville, N. H.*	52 Bowdoin Street
Dartmouth College		
Singleton, Sarah	*Bangor*	393 State Street
Taylor, Charles Sumner	*Deer Isle*	261 Grove Street
Towle, Horace Hamblen, Jr.	*Portland*	5 Ohio Street
Weeks, Thomas Nathan	*Winslow*	10 Clark Street

FIRST YEAR

Blair, Wellington Arthur	*Waterville*	Theta Chi House, Orono
Bridgham, Wade Lawrence	*Bridgton*	148 Kenduskeag Avenue
Brown, Cecil Earle	*Norway*	241 Center Street
University of Maine		
Cohn, Abraham David George	*New York City*	150 York Street
Corridon, John Henry	*Portland*	112 Sanford Street
Dufficy, Edward Charles	*Rumford*	173 Ohio Street
University of Maine		
Eaton, George Franklin, A. B.	*Bangor*	103 Fourth Street
Bowdoin College, 1914		
Ford, Perley Harvey	*Mechanic Falls*	17 Fourth Street
Bates College		
Fortier, Albert James	*White River Junction, Vt.*	47 Summer Street

Frothingham, Thomas Warren University of Maine	*Portland*	Sigma Chi House, Orono
Gilman, Madison Leavitt University of Maine	*Woodfords*	BetaTheta Pi House, Orono
Harmon, Erald	*Westbrook*	8 Union Place
Haskell, Herbert Vaughn	*Lincoln*	9 Boynton Street
Hollis, Harold William	*Lisbon Falls*	176 Court Street
Hooker, Earl Dewey	*Springfield, Mass.*	173 Ohio Street
Hurley, Harold William University of Maine	*Wareham, Mass.*	114 Sanford Street
Johnson, William Alonzo University of Maine	*Bangor*	24 Kossuth Street
Keating, Frederick Augustine University of Maine	*Upper Gloucester*	112 Sanford Street
Kelleher, Michael Clarence, Jr.	*Westerly, R. I.*	25 Fourth Street
Lanpher, Stacy Clifford, A. B. University of Maine, 1908	*Foxcroft*	53 Fourth Street
Libby, Harry Cummings	*Portland*	84 Cedar Street
Miles, Adelbert Laroy	*Ellsworth*	161 Hammond Street
Morse, Mayland Herbert	*Anson*	79 Summer Street
Mulvany, Harry Thomas	*Bangor*	199 Pine Street
Rudman, Abraham Moses	*Bangor*	26 Market Street
Webster, William Clifford University of Maine	*Gorham*	114 Sanford Street
White, Horace Hudson	*Orono*	Orono

SPECIALS

Baldwin, Dudley	*Cherryfield*	79 Summer Street
Bartlett, Charles Hammatt, A. B. Harvard University, 1882	*Bangor*	59 Cedar Street
Brownsteine, Abraham Abe	*Boston, Mass.*	The Gerard
Clarke, Joseph Lawrence	*Waterville*	10 Clark Street
Conquest, Edward James	*Bangor*	88 Sidney Street
Crowley, Wallace Edgar	*Corinth, Vt.*	53 Fourth Street
Flanagan, William Joseph Anselm's College	*Ellsworth*	313 State Street
Fullerton, Edward Grier Lafayette College	*New Haven, Conn.*	Y. M. C. A.

Gallagher, William Wallace	*Limestone*	10 Highland Avenue
Gallasini, Thomas Dominic	*Milford, Mass.*	84 Cedar Street
Hanley, Michael John	*Bangor*	101 Fern Street
Hurley, Martin Francis	*Bangor*	50 Walter Street
Lally, William John	*Livermore Falls*	80 Larkin Street
Lane, Orlando Hook	*Topsfield*	204 Harlow Street
Levy, Arthur	*New York City*	150 York Street
Lewis, John	*Skowhegan*	316 Hammond Street
Bowdoin College		
Little, Joseph Louis	*Portland*	112 Sanford Street
Mahoney, Edmund Patrick	*Portland*	112 Sanford Street
McParland, Bernard Joseph	*Lawrence, Mass.*	16 Sanford Street
Middlebury College		
O'Connell, James Frederick	*Milford*	85 Hammond Street
Shesong, Leo Gardner	*Oakland*	166 Union Street
Colby College, 1913		
Siddall, Cecil James	*Sanford*	17 Fourth Street
Stevens, Norris Frederick	*St. Lambert, Quebec, Canada*	176 Court Street
Colby College		
Sullivan, John Anthony	*Nashua, N. H.*	62 High Street
Thompson, Nathan Webb	*Portland*	Theta Chi House, Orono
Watson, James Bennett	*Wheeling, W. Virginia*	176 Court Street
Williams, William Earl	*Bangor*	25 Fourth Street
Brown University		

TWO YEARS PHARMACY

SECOND YEAR

Bullard, Morton Leonard	*Dexter*	307 H. H. Hall
Burke, John Wynne	*Randolph*	H. H. Hall
Corrigan, William Joseph	*Millinocket*	Θ X House
Cruz, de la, John Raymond	*Colombia, S. A.*	Mill Street
Daviau, Omar	*Waterville*	Λ X Λ House
Gillis, Allan Philputt	*Lubec*	311 Oak Hall
Johnson, Oscar	*Monson*	Spearen's Inn
Lawton, Daniel Edwin	*Southwest Harbor*	Λ T Ω House
Malloch, Arthur	*Lubec*	311 Oak Hall
Rowe, Percy Daniel	*Island Falls*	104 H. H. Hall

FIRST YEAR

Blanchet, Earl Oliver	*Northampton, Mass.*	212 H. H. Hall
Burton, Louis Russell	*Bar Harbor*	Peters Street
Demers, Odias Joseph	*Sanford*	305 Oak Hall
Grant Horace Elwin	*Waterville*	109 Oak Hall
Hargreaves, Frank Irving	*Sanford*	305 Oak Hall
Kelly, John Francis	*Orono*	Mill Street
Leighton, Lester Howard	*Bar Harbor*	Spearen's Inn
Macklin, William James	*Millinocket*	Θ X House
Nauss, Julius Edward	*New York City*	25 Mill Street
O'Leary, Edwin Dolan	*Bangor*	Β Θ Π House
Parker, Chester Robert	*Bluehill*	203 H. H. Hall
Staples, Carroll Russell	*Norridgewock*	64 Lincoln Street, Bangor
White, Lester Charles	*West Enfield*	111 H. H. Hall

HOME ECONOMICS

SECOND YEAR

Dugan, Frances Edith	*Bangor*	8 State Street Avenue
Haley, Geneva Brackett	*Cornish*	Balentine Hall
Higgins, Dorrice Mae	*Brewer*	Mt. Vernon House
Jones, Frances Myrtle	*Bangor*	250 State Street, Bangor
Lewis, Alice Marguerite	*Gardiner*	Mt. Vernon House
Niles, Eunice Hale	*Hallowell*	Mt. Vernon House
Scrimgeour, Hazlewood	*Lewiston*	Balentine Hall

FIRST YEAR

Beckett, Mary Newton	*Calais*	Colburn House
Burleigh, Mollie Geneva	*Biddeford*	Mt. Vernon House
Burr, Marjorie Ethelyn	*Springfield*	Mt. Vernon House
Chalmers, Ruth Bartlett	*Bangor*	Sampson House
Clarke, Dorris Hunter	*New Sharon*	Balentine Hall
Clarke, Edith Gertrude	*Peak Island*	Balentine Hall
Clarke, Gladys Verna	*New Sharon*	Balentine Hall
Clark, Lucile Greeley	*Freedom*	97 Main Street
Cram, Beryl Eliza	*New Sharon*	Balentine Hall
Curtis, Beatrice Valentine	*Monmouth*	Balentine Hall
Evans, Anna	*Bangor*	Howard St., Bangor
Flint, Fannie Persis	*West Baldwin*	Balentine Hall
Folley, Veda Desire	*Sangerville*	Orono

Harvey, Evelyn Mae	*Patten*	Stillwater
Kellogg, Thelma Louise	*Vanceboro*	Balentine Hall
Jones, Iva Mildred	*Unity*	Orono
Lawlis, Hazel Mae	*Bartlett, N. H.*	Mt. Vernon House
Leighton, Mildred Estelle	*Orono*	Orono
McGinnis, Helen	*Waterville*	Balentine Hall
McGonigal, Marguerite Elletta	*Lubec*	Colburn House
McLaughlin, Marion Catharine	*Hallowell*	Colburn House
Mooers, Susie Dyer	*New Sharon*	Balentine Hall
Perry, Emma Spring	*Machias*	Colburn House
Pike, Helen	*Monmouth*	Balentine Hall
Randall, Constance	*Augusta*	Balentine Hall
Royal, Erma Lucile	*Houlton*	Mt. Vernon House
Stetson, Maude Haskell	*Augusta*	Colburn House
Taylor, Helen Perley	*Peabody, Mass.*	Sampson House
Thomas, Marion Louise	*Newburyport, Mass.*	Balentine Hall
Wilkins, Dorris Elizabeth	*Kingfield*	Mt. Vernon House
Wilson, Phyllis Hazel	*Houlton*	Colburn House

SCHOOL COURSE IN AGRICULTURE

SECOND YEAR

Adams, Merle	*Canton Point*	201 H. H. Hall
Cawley, Henry Loel	*Peabody, Mass.*	209 Oak Hall
Crowell, David	*Dorchester, Mass.*	Park Street
Dearborn, Philip Murray	*Cape Elizabeth*	Park Street
Eaton, Richard Chandler	*Exeter*	Park Street
Fisk, Theodore Orson	*Worcester, Mass.*	Park Street
Harris, Frank Waterman	*Milo*	Park Street
Hawkes, Harry Sawyer	*Cumberland Center*	Λ X Λ House
Norton, Rupert Stacy	*Kezar Falls*	Park Street
Packard, Ralph	*Norridgewock*	Park Street
Walker, Frank Merrill	*Saco*	Park Street
Willard, Mary Ellen	*Llanerch, Penna.*	Balentine Hall

FIRST YEAR

Atwood, Nelson Dingley	*St. Albans*	Grove Street
Bennett, Harry Stowe	*Millbury, Mass.*	Park Street
Carlstrom, Edwin Carl	*Auburn, Mass.*	Park Street
Fowler, John Earl	*Portland*	Park Street
Hagstrom, Conrad Walfrid	*Auburn, Mass.*	209 Oak Hall

Hobbs, Ellsworth Joseph	*Mattawamkeag*	404 H. H. Hall
Johnson, Harold Winthrop	*Waltham, Mass.*	Park Street
Kurkjian, Balshazzar	*Lynn, Mass.*	Orono
Lambert, Leon Elwin	*Brewer*	Brewer
Martin, Edwin Clarence	*Liberty*	Park Street
Moore, Joseph Henry, Jr.	*Winthrop*	Campus
Morse, Horace Gray	*Bath*	House
Parker, Howell Windsor	*Douglass, Mass.*	Orono
Shaw, Chauncey Germond,	*West Roxbury, Mass.*	Mill Street
Sherman, Reid Myles	*Island Falls*	College Street
Trueworthy, George Fay	*Mattawamkeag*	404 H. H. Hall
Warren, Ralph Edward	*Lisbon Falls*	Park Street
Weeks, Fred Warren	*Cornville*	112 Oak Hall

SUMMER TERM

Ashley, Raymond Harman, B. S. 1903, M. A. 1905, M. Sc. 1906, Ph. D. 1906	*Orono*
Rutger's College, Yale University	
Averill, Walter Boardman	*Old Town*
Baker, Sarah Marinda	*Farmington*
Barker, Corinne Maud	*Bangor*
Barrows, Henry Robbins, Ph. B., 1906, M. S., 1913	*Orono*
Hamilton College	
Bayer, Harry Lewis	*Brooklyn, N. Y.*
Bell, Randolph Everett	*North Attleboro, Mass.*
Bickford, Miretta Lydia	*Orono*
Bingham, Andrew, Jr.	*Littleton, N. H.*
Blaisdell, Lawrence Allen	*Lynn, Mass.*
Blanchard, Everard Eells	*Buenos Aires*
Blanchard, Ensor Harding	*Buenos Aires*
Boring, Lydia Truman, A. B., 1906	*Philadelphia, Penna.*
Bryn Mawr College	
Brackett, Vernon Kilby	*Buckfield*
Brewster, Edward Hersey	*Patten*
Bright, Elizabeth Mason	*Bangor*
Brown, Frederic Nelson	*Orono*
Brown, Lewis John	*South Windham*
Cahill, Alice Lena	*Bingham*
Chapman, Fred Elton	*Lake Hermon*

Clarke, Hester, Anen	*Franklin*
Clement, Stephen Caldwell	*Belfast*
Coffey, Ralph Thompson	*South Brewer*
Colbath, Muriel Eva	*Hampden*
Corson, Clarence True	*New Sharon*
Cram, Lewis Kittridge	*New Sharon*
Cruz, de la, John Raymond	*Colombia, S. A*
Currier, Karl Moody	*Brewer*
Damren, Fred Llewellyn	*Auburn*
Day, George Willis, B. S. '95 Dartmouth College	*East Waterboro*
Dempsey, Charlotte Isabelle	*Stillwater*
Dorsey, Llewellyn Morse	*Augusta*
Dunham, Carroll Kenneth	*Portland*
Edes, Omar Kelsey	*Dexter*
Everett, Sarah Ruth, A. B., 1911, A. M., 1914 Oskalousa & Boston University	*Worcester, Mass.*
Falvey, John Michael	*South Berwick*
Faulkner, William Thomas	*Ashland*
Files, Frederick Whitney	*Cornish*
Fletcher, Maurice Arthur, Ph. C. 1913 University of Maine	*Wilton*
Fogg, Rebecca Abigail	*Bucksport*
Frothingham, Thomas Warren	*Portland*
Fung, Wai	*Worcester, Mass.*
Gilman, Madison Leavitt	*Anson*
Guild, Mrs. Esther	*Machias*
Gulliver, James Lucius	*Auburn*
Gray, Ernest Linwood	*Mars Hill*
Grant, Charles Harold, A. B., 1911 University of Maine	*Bangor*
Gowen, John Whittemore, B. S., 1914 University of Maine	*Arlington, Mass.*
Goodwin, Eugene Wiley	*Rockport*
Hanson, Ernest Freeman	*Gorham*
Hartshorn, Zenas Downs	*Searsport*
Hill, William Barlow	*Gorham*

Howe, Mrs. Myra Vickery, B. A., 1899 Mt. Holyoke College — *Presque Isle*
Howland, Edgar Gordon — *Plymouth, Mass.*
Hunt, Lilian Crosby — *Old Town*
Jewett, Rosalind May, B. S., 1910 Colby College — *Waterville*
Jones, Grace Mutell (Mrs.) — *Orono*
Jordan, Marion Blanche — *Waltham, Mass.*
Kelley, Margaret June, B. A., 1912 University of Maine — *Bangor*
Keyte William Albert — *Dexter*
Kilburn, Frank Macready — *Ft. Fairfield*
King, Earl Christopher — *Orono*
Lanpher, Stacy Clifford, B. A., 1908 University of Maine — *Foxcroft*
Lanpher, Mrs. Bessie Mary — *Foxcroft*
Leavitt, Jennie Fern — *East Corinth*
Libby, Eliza Sands — *West Buxton*
Linscott, Edward Lyon — *Bar Harbor*
Littlefield, Angie Mae — *Old Town*
Lucas, Warren Stannope — *Auburn*
McAvey, Liela Joyce — *Bangor*
McCue, William Coleman — *Newport*
MacIntire, Donald Josiah — *Biddeford*
Maines, Esca Allen — *Norway*
Maxfield, Frank Byron — *Bangor*
Mann, Marjorie Alletta — *Bradley*
Martin, Blynn — *New Gloucester*
Martini, Mary — *Orono*
Mason, Alice Eliza — *Mount Desert*
Mason, Walter Lee — *Orono*
Merrill, Charles Edward, A. B., 1910 Bates College — *Patten*
Mitchell, Frances Ricker — *Cherryfield*
Morrell, Lester Howe — *Lewiston*
Morris, Frank Albert — *Old Town*
Morrison, Mildred Cora — *Bar Harbor*

Myrick, Leroy Henry	*East Machias*
Maley, Everett Thornton, Jr.	*Bangor*
Noddin, Effie, A. B. 1909 Woman's College	*Skowhegan*
O'Neil, Harry Dennis	*Bangor*
Parks, David Weaver	*Ft. Fairfield*
Pfaff, Ethel Eustis, A. B., 1904 Bryn Mawr College	*Bangor*
Phillips, Charles	*Franklin*
Poore, Alice Mildred	*Robbinston*
Purington, Clinton Everett	*Portland*
Redman, Mary Evangeline, A. B., 1912 Bates College	*Dexter*
Redman, Ralph Woodbury, B. S., 1912 University of Maine	*Orono*
Roberts, George Harley	*Brownville*
Roberts, Jane Peirce	*Bangor*
Robie, Frederick	*Gorham*
Rogers, Walter Henry	*Topsham*
Rowe, Mary Louise	*Bangor*
Russell, Sibyl Lois	*Orono*
Savage, Frank John	*Fairfield*
Sawyer, Grace Ruth	*Old Town*
Scott, Edith Trenton Normal School	*Englewood, N. J.*
Scribner, John Leslie	*Plattsburgh, N. Y.*
Scribner, Stasia Josephine Emerson College	*Bangor*
Skillin, Clifford Augustus	*South Portland*
Slocum, Paul Frederick	*New York City*
Smith, Royal Howard Gould	*Gorham*
Southard, Lawrence	*Brooklyn, N. Y.*
Sowle, Wesley Atwood	*Ellsworth*
Stanley, Winthrop Hamor, B. A., 1910 University of Maine	*Hull's Cove*
Stanton, Augusta Emily Hazelton	*Great Neck, N. Y.*

Stephens, Aberta, Ph. B., 1911 Iowa Wesleyan College	*Wapello, Iowa*
Titus, Nina Edith Castine Normal School	*Dorchester, Mass.*
Towle, Lillis Katharine	*Bangor*
Turner, O'Dillion Charles	*Veazie*
Urann, Eugene Harrison	*East Sullivan*
Van Dyke, Percy James	*McIndoes, Vermont*
Violette, Augusta Genevieve	*Milford*
Walker, James Clifford	*Portland*
Webber, Ella Cynthia	*Mount Vernon*
Webber, Elmer Harrison	*Mount Vernon*
Wheeler, Delbert Amos, B. S., 1897 New Hampshire State College	*Everett, Mass.*
White, Harold Chandler	*Bangor*
Whiteside, Thomas, A. B., 1889, S. T. B., 1891 Boston University	*Orono*
Wilson, Rolla Tenney	*Bangor*
Wing, Caroline Roberta, B. A., 1896 Smith College	*Bangor*
Worcester, Henry Franklin	*Old Orchard*
Wormwood, Alice Eleanor, B. A., 1913 Wellesley College	*Bangor*
Young, Mary Kathleen	*Waldoboro*

GENERAL SUMMARY

FACULTY

President	1	
Professors	39	
Associate Professors	18	
Assistant Professors	13	
Instructors	49	
Lecturers	8	
Assistants	9	
Miscellaneous	13	
Total	150	
College of Agriculture	36	
College of Arts and Sciences	47	
Agricultural Experiment Station	15	
College of Law	11	
College of Technology	32	
Officers common to all Colleges	9	
	150	

STUDENTS

Graduate Students	33	
Seniors	124	
Juniors	134	
Sophomores	201	
Freshmen	352	
Specials	36	
College of Law, Seniors	15	
Juniors	21	
First Year	27	
Specials	27	90

Two Years Course in Pharmacy, Second Year	10	
First Year	13	23
Two Years Course in Home Economics		
Second Year	7	
First Year	31	38
School Course in Agriculture		
Second Year	12	
First Year	18	30
Summer Term		131
Duplicates		63
Total		1129

CLASSIFICATION BY RESIDENCE

Maine, by counties:		
Androscoggin	53	
Aroostook	36	
Cumberland	139	
Franklin	24	
Hancock	53	
Kennebec	66	
Knox	23	
Lincoln	19	
Oxford	35	
Penobscot	255	
Piscataquis	36	
Sagadahoc	13	
Somerset	30	
Waldo	25	
Washington	45	
York	64	906
California	1	
Connecticut	15	
Florida	1	
Indiana	1	
Iowa	1	
Kentucky	1	
Massachusetts	135	
New Hampshire	31	
New Jersey	3	
New York	12	

Pennsylvania	7	
Rhode Island	3	
Vermont	4	
Washington	1	
West Virginia	1	
Wisconsin	1	218
Argentina	2	
Canada	1	
Columbia	1	
Turkey	1	5
		1129

CLASSIFICATION BY COLLEGES

College of Agriculture	305	
College of Arts and Sciences	309	
College of Law	92	
College of Technology	423	
		1129

CLASSIFICATION OF CANDIDATES FOR DEGREES

College of Agriculture	223	
College of Arts and Sciences	235	
College of Law	65	
College of Technology	411	
		934

The following students registered in short courses given in the College of Agriculture

DAIRYING AND GENERAL AGRICULTURE

Abbott, W. Arnold	S. Waterford, Me.
Andrews, Carl E.	Jefferson, Me.
Blake, Maurice	West Falmouth, Me.
Bodkin, Walter H.	Woodfords, Me.
Capino, Simon	Greenville, Me.
Chapman, H. E.	East Corinth, Me.
Cleaveland, Lewis	Exeter, Me.
Cleaveland, R. J.	Exeter, Me.
Downs, John B.	Skowhegan, Me.
Durgin, Chas. M.	Woodfords, Me.
Fenderson, Carleton	Saco, Me.
Frost, Percy W.	Bangor, Me.
Hubbard, Walter L.	Charleston, Me.
Kettell, Albert B.	Brewer, Me.
McAvey, Carl J.	Charleston, Me.
Merrill, A. R.	Bangor, Me.
Northrop, Frank B.	Saco, Me.
Pitcher, Amelius C.	Lincolnville, Me.
Rich, Irving H.	Charleston, Me.
Rogers, L. D.	Bath, Me.
Rubin, Samuel	Malden, Mass.
Sayward, Ralph K.	Auburn, Me.
Senna, Arthur P.	St. Andrews, N. B.
Sewall, James W.	Old Town, Me.
Tucker, Edward M.	Newport, Me.
Curtis, Walter E.	Curtis Corner, Me.

HORTICULTURE

Andrews, Carl E.	Jefferson, Me.
Bartlett, George	Sorrento, Me.
Chapman, H. E.	East Corinth, Me.
Clay, Mrs. Cecil	Deering, Me.
Curtis, Walter E.	Curtis Corner, Me.
Downs, John B.	Skowhegan, Me.
Emerson, Frank	Enfield, Me.
McIntosh, M. A.	Great Works, Me.
Pitcher, A. C.	Northport, Me.

Sprague, Mrs. Fremont	Ayer, Me.
Sprague, Fremont J.	Ayer, Me.
Sullivan, D. C.	Hebron, Me.
Foster, Ruel	Round Pond, Me.
Allen, Wm. J.	Bar Harbor, Me.

POULTRY HUSBANDRY

Bachelder, Paul J.	Bangor, Me.
Bartlett, Mrs. Ruth B.	Sorrento, Me.
Black, D.	West Brooksville, Me.
Bodkin, W. H.	Woodfords, Me.
Dickey, Eva Augusta	Greene, Me.
Durgin, C. M.	Woodfords, Me.
Emerson, S. E.	Orono, Me.
Frost, Percy W.	Bangor, Me.
Gray, Vernon	Brewer, Me.
Hubbard, Walter L.	Charleston, Me.
Ireland, Everett C.	Bangor, Me.
Loud, Orman W.	Old Town, Me.
Lowell, Abner W.	Portland, Me.
Meady, Mrs. F. H.	Gardiner, Me.
Northrup, Frank	Saco, Me.
Nutting, Everett W.	Augusta, Me.
Parker, A. A.	York Corner, Me.
Parker, Mrs. R. Y.	York, Me.
Piper, Harold L.	Troy, Me.
Rubin, Samuel	Malden, Mass.
Sayward, Ralph K.	Auburn, Me.
Senna, Arthur P.	St. Andrews N. B.
Smith, Walter R.	Bangor, Me.
Spencer, George	Hebron, Me.
Stanley, John M.	Auburn, Me.
Tolman, A. M.	Carrol, Me.
Thurlow, Myra D.	Stillwater, Me.
Wagner, Chas.	Norridgewock, Me.

These students have formerly been included in the general summary of students registered at the University. If they had been so included this year the total enrollment would have been 1196

INDEX

	PAGE
Absence from examinations	45
Administration, officers of	8
Advanced standing	54
Admiralty	177
Admission	54
to College of Law	175
Agricultural Chemistry	100
Agricultural Engineering	102
Agricultural Experiment Station	228
Council	7
Agriculture, College of	71
Agronomy courses	93
curriculum	76
Alpha Zeta	42
Alternating Currents	216
Alumni Advisory Council	237
Alumni associations	237
Animal Industry courses	95
curriculum	76
Appointments	240
Archaeology	145
Architecture	150
Art	149
Art Museum	39
Arts and Sciences, College of	112
Associations	40
Astronomy	158
Athletic field	34
Bacteriology	99
Battalion	241
Bibliography	121
Biological Chemistry	100
Biology courses	121
entrance	68
Botany	123
Buildings and equipment	27
Business Law	126
Calendar	3
Central heating plant	34
Cercle Francais	41
Certificate, admission by	56
Certificates in Agriculture	86
Chemical Engineering curriculum	184
Chemistry courses	201
curriculum	187
entrance	68
Christian Association	41
Civil Engineering courses	208
curriculum	189
Commencement exercises, 1914	245
Committees of the Faculty	22
Cookery	107
Correspondence courses	90
Criminal Law	178
Curricula	69
Agriculture	75
Agronomy	76
Animal Industry	76
Arts and Sciences	112

	PAGE
Chemistry	187
Chemical Engineering	184
Civil Engineering	189
Electrical Engineering	191
Forestry	82
Graduate	118
Home Economics	85
Horticulture	78
Law	177
Mechanical Engineering	194
Pharmacy	197
Dairy courses	77
Winter courses	88
Debate	135
Declamations	134
Sophomore prize	52, 134
Degrees	46
advanced	47
Degrees conferred, 1914	247
Deposits	51
Dormitories	50
Drawing	222
Economics	125
Education courses	129
Electrical Engineering courses	213
curriculum	191
Embryology	123
Endowment of the University	25
English courses	133
entrance	59
English Literature	141
Entomology	122
Entrance	54
Essays	135
Establishment of the University	23
Evidence	178
Examinations, arrearage	55
entrance	56
Expenses	49, 176
Experiment Station	228
Extension work in Agriculture	89
Faculty, University	9
Agriculture	71
Arts and Sciences	112
Experiment Station	228
Law	174
Farm Management	102
Fees, laboratory	50
Forestry courses	103
curriculum	82
Fraternity houses	35
French courses	167
entrance	61
Geological collection	38
Geology	101
German courses	142
entrance	63
Gothic	144
Graduate curricula	118
Graduation, requirements for	73, 115, 184
Greek courses	145
Greek architecture	150
Gymnasium	44
Herbarium	38
Histology, Animal	124
Plant	124
History courses	150
entrance	66
Home Economic courses	107
curriculum	84
short courses	85
Honorary societies	42
Honors	46
conferred, 1914	241
Horticulture courses	110
curriculum	78
Hydraulics	210

Index

	PAGE
Income of the University	25
Industrial Chemistry	205
Infirmary	33
Insurance	179
Italian	169
Journalism	117
Junior Exhibition	52
speakers, 1914	240
Kidder scholarship	52
Kittredge loan fund	52
Laboratory charges	50
Landscape Gardening	110
Latin	153
Law, College of	174
Library	30, 35
Loans	52
Logic	162
Lumbering	106
Machine Design	219
Maine Masque	41
Major instructors	115
Materia Medica	223
Mathematics courses	156
entrance	66
Mechanical Engineering courses	218
curriculum	194
Mechanics	222
Mechanics and Drawing	222
Medicine, preparation for	118
Meteorology	164
Military Science	43
courses	226
Museum	38
Observatory	33
Optics	164
Organic Chemistry	202
Organization of the University	69
Organizations	40
Pharmacy	223
curricula	197
Phi Kappa Phi	42
members	240
Philosophy	161
Physical Chemistry	204
Physical Geography	68
Physical Training	44
courses in	227
Physics courses	163
entrance	68
Physiology	124
Political Economy	125
Poultry Husbandry courses	97
Power House	35
Precision of Measurements	165
Prescriptions	225
Prizes	52
awarded, 1914	243
Psychology	162
Public Speaking	134
Publications	42
Radio—Activity	165
Reading Room	35
Regulations of the University	45
Required courses	226
Requirements, for admission	54
Rhetoric	135
Romance Languages	167
Roman Numismatics	155
Roman Philosophy	154
Rooms	50
Rooms for women	50
Rule of conduct	45
Sanskrit	155
Scholarship honors	46
Scholarships	52
School Course in Agriculture	86

	PAGE
Sewing	108
Short Courses in Agriculture	88
Silviculture	105
Societies	40
Sociology	126
Sophomore prize declamations	52, 134
speakers, 1914	240
Spanish	168
Steam Engineering	221
Students, catalog of	252
classification of	289
number of	290
Studies, quota of	45
Structures	210
Summer Term	233
expenses	235
Surveying	208
Tau Beta Pi	42
Technology, College of	182
Faculty	182
Theology, preparation for	117
Theses	49
Torts	181
Treasurer	8
Trustees, Board of	6
executive committee of	6
Tuition Charges	49
University, history of	23
building and equipment	27
bulletins	42
endowment	25
establishment	23
location	26
object	23
Organization	39
Veterinary Science	99
Winter courses	88
Woodwork	218
Women, admission of	54
Worship, public	45
Young Women's Christian Association	42
Zoology courses	125
collections	38

UNIVERSITY OF ILLINOIS-URBANA
3 0112 112205163